

621.37

CATALOGUE

OF

ELECTRICAL TEST INSTRUMENTS,

MANUFACTURED BY

ELLIOTT BROTHERS,

449, STRAND.

Mathematical, Optical and Physical Instrument Makers,

TO THE ADMIRALTY, WAR OFFICE, INDIAN GOVERNMENT,

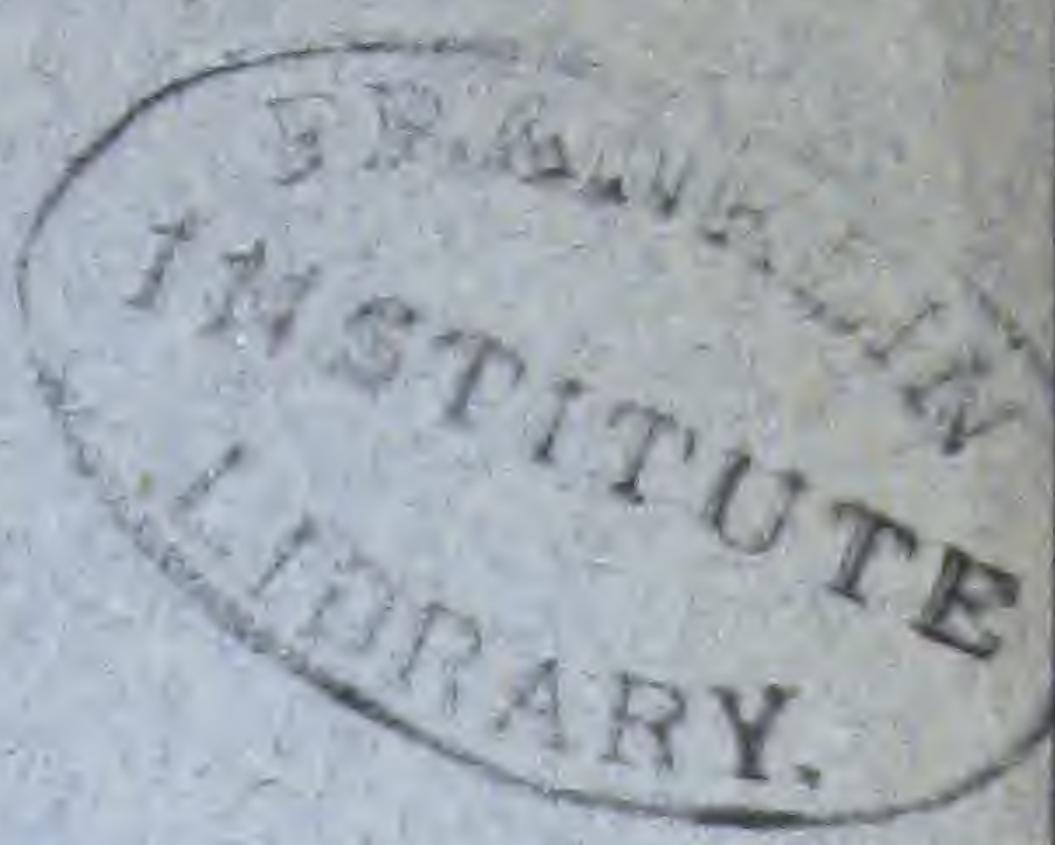
MILITARY COLLEGES, UNIVERSITIES, POST-OFFICE TELEGRAPHS, CROWN COLONIES,

ORDNANCE SURVEY, FOREIGN GOVERNMENTS, AND ALL THE PRINCIPAL

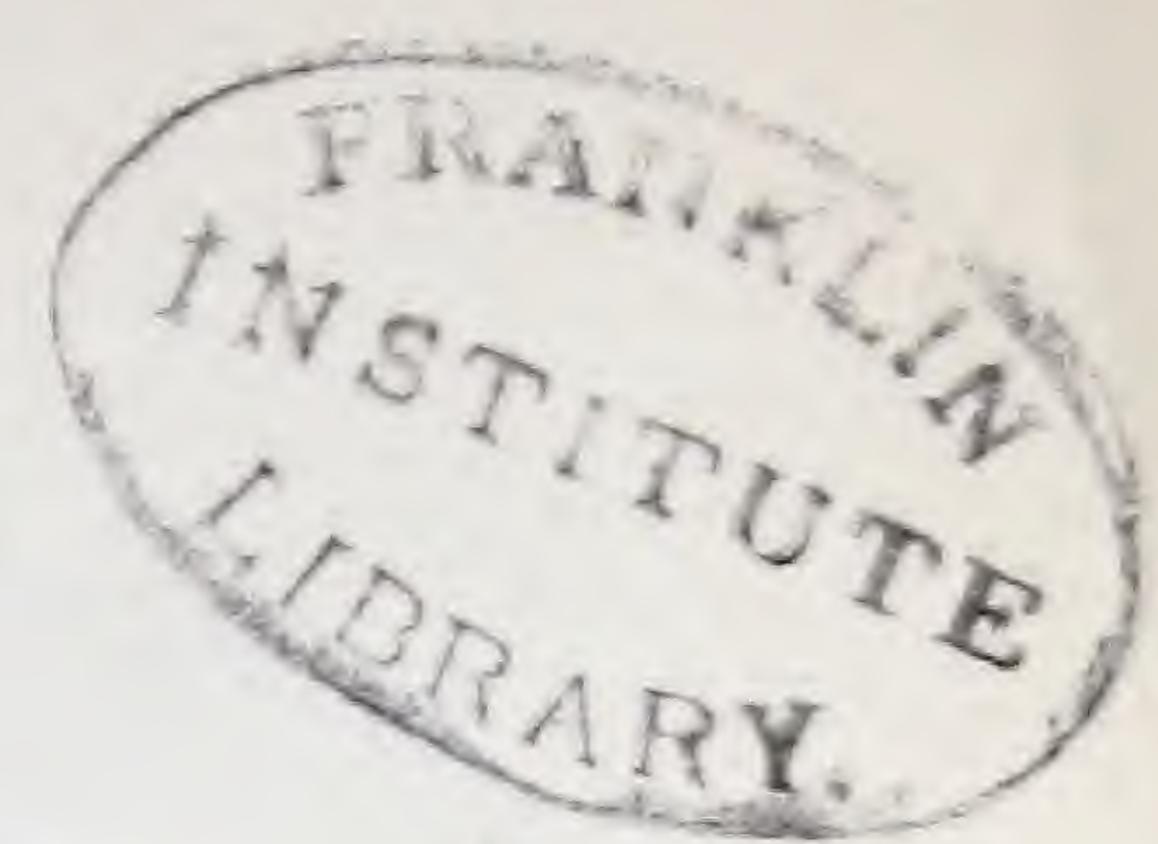
RAILWAY AND TELEGRAPH COMPANIES.

MANUFACTORY—

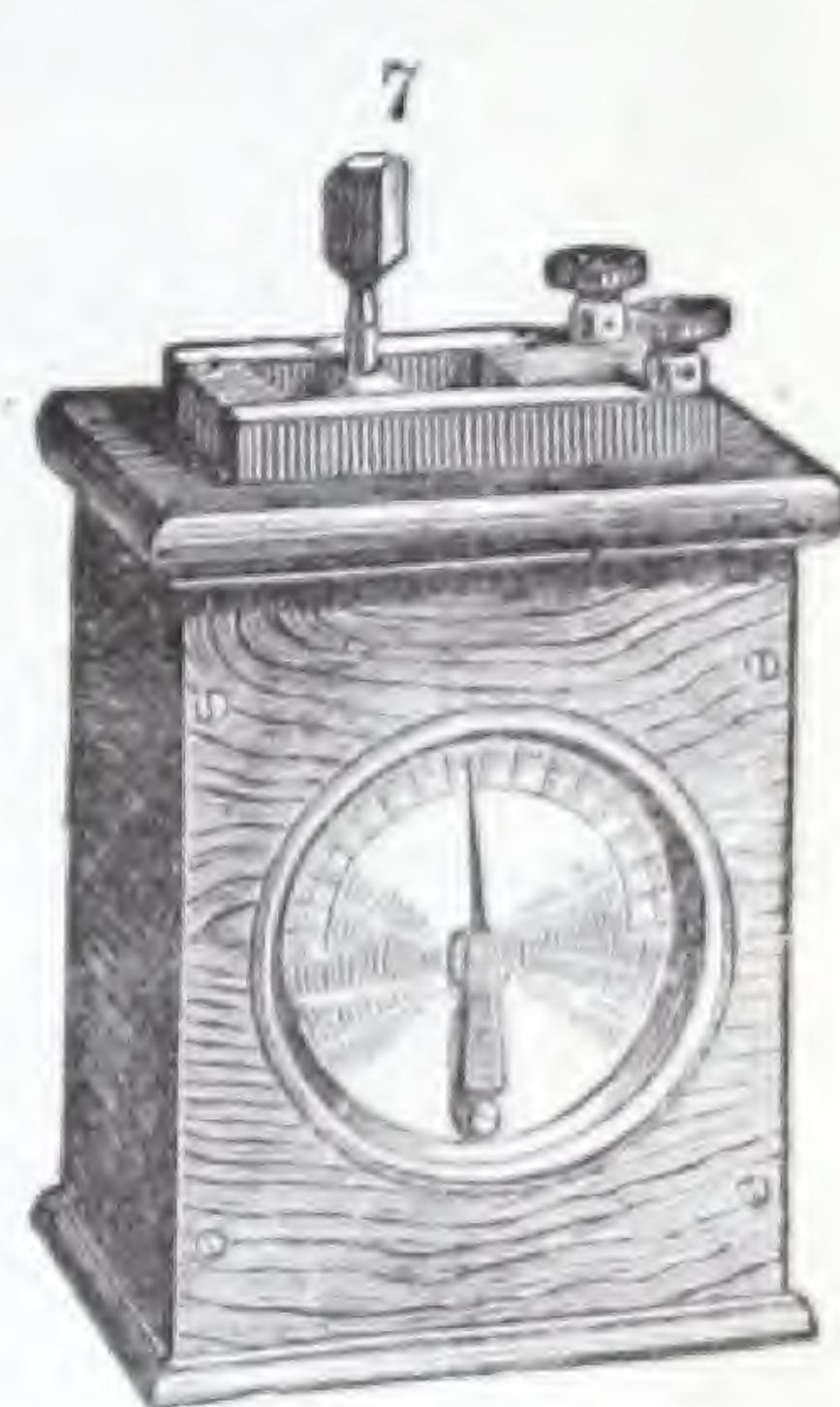
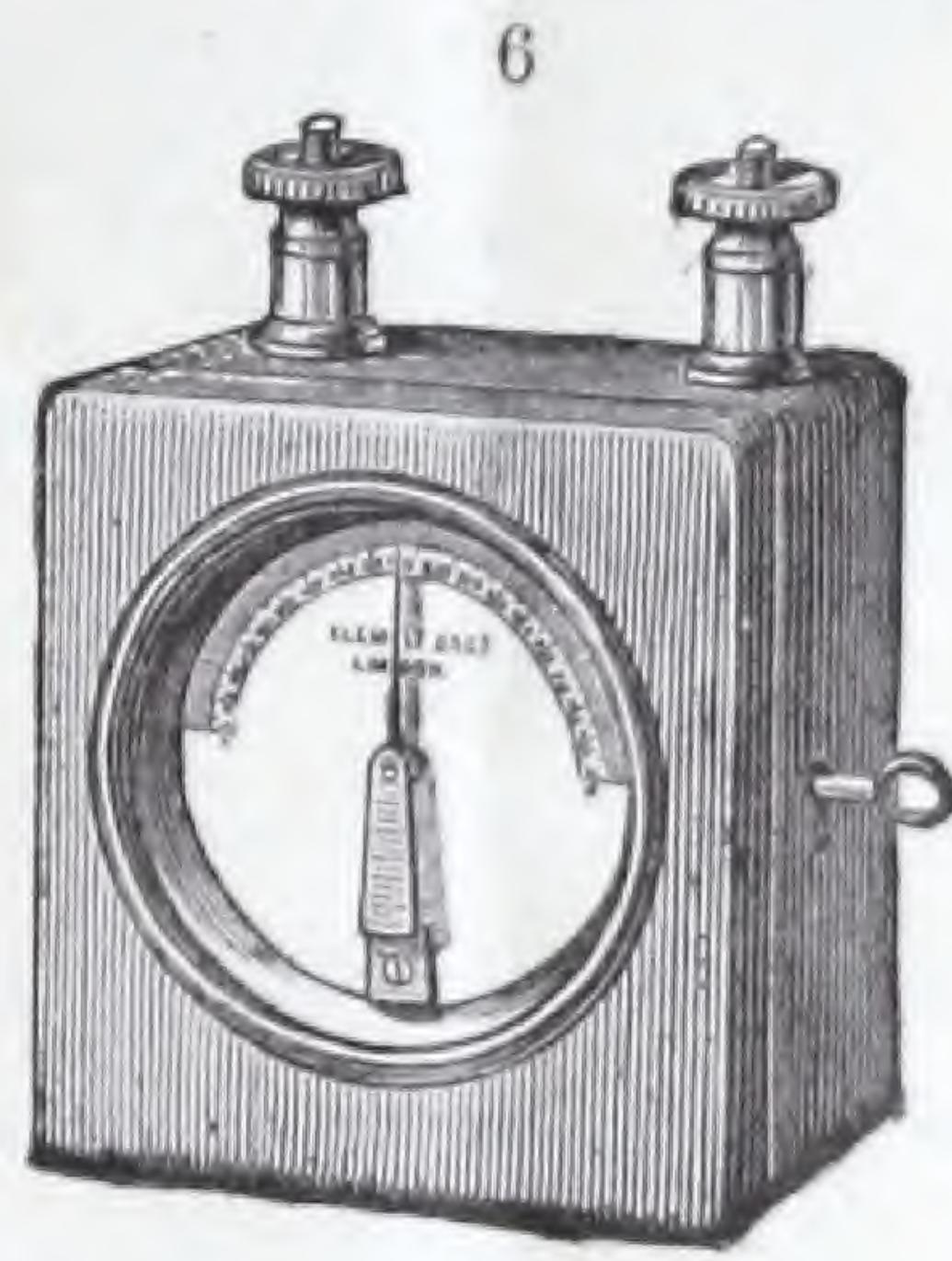
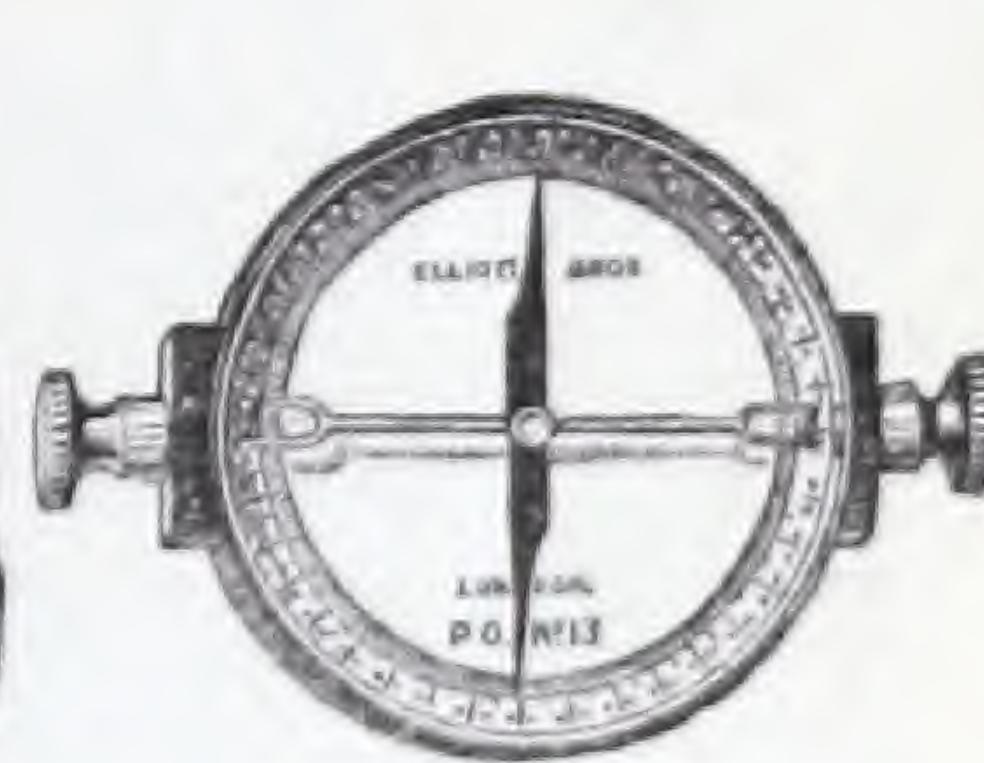
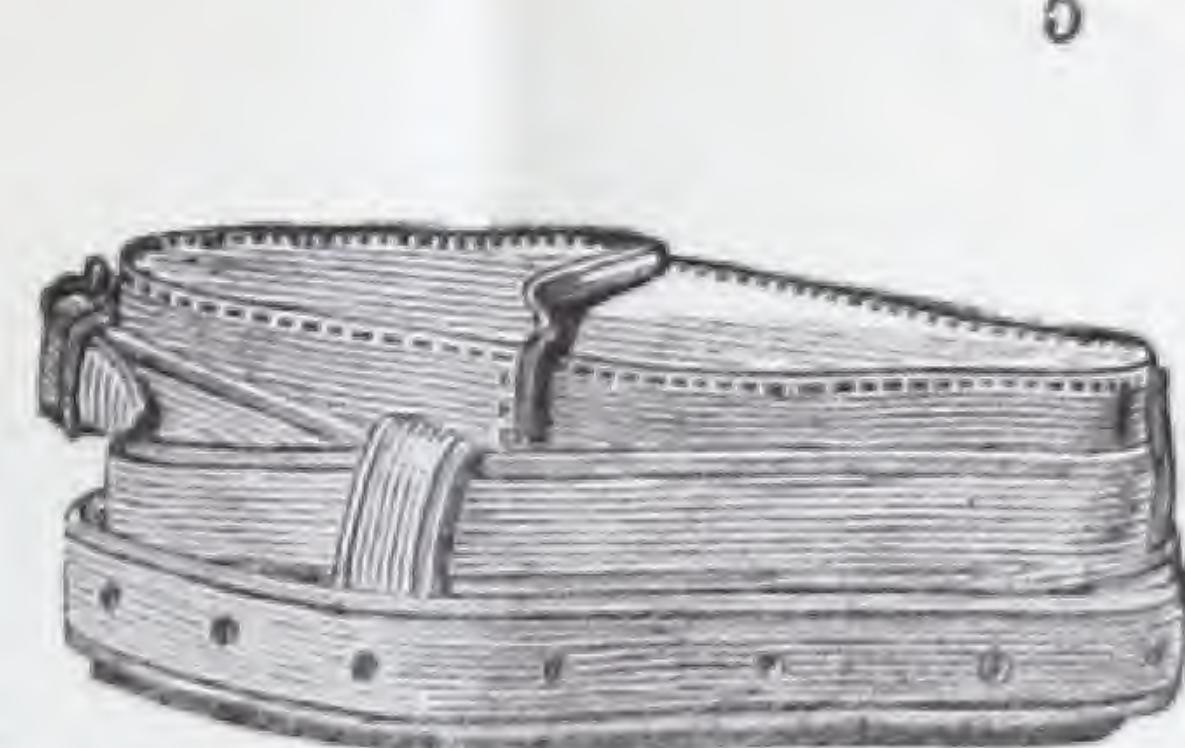
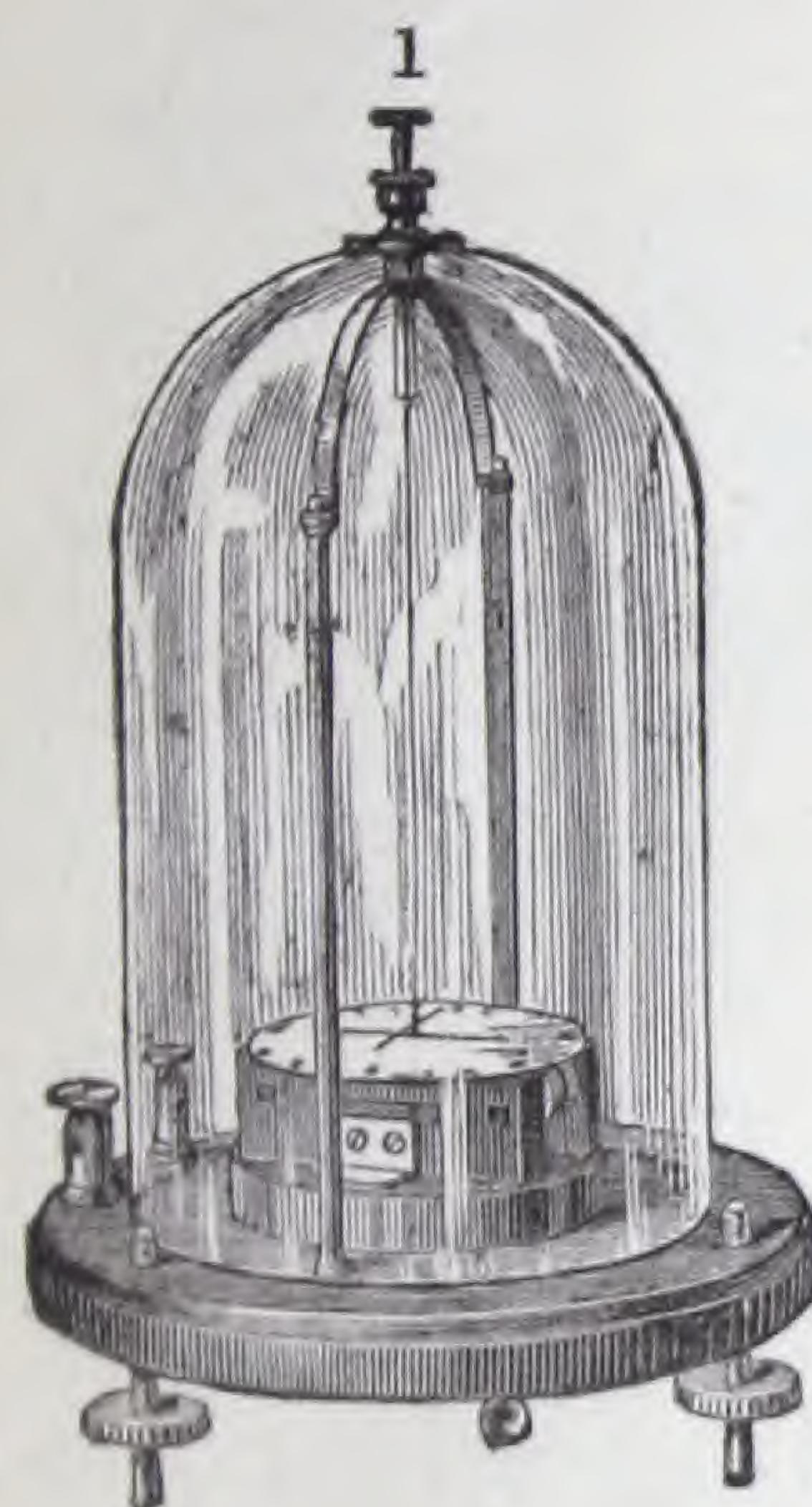
101 & 102, ST. MARTIN'S LANE,
LONDON, W.C.



LONDON : G. WITT, PRINTER, EARL'S COURT,
LEICESTER SQUARE.

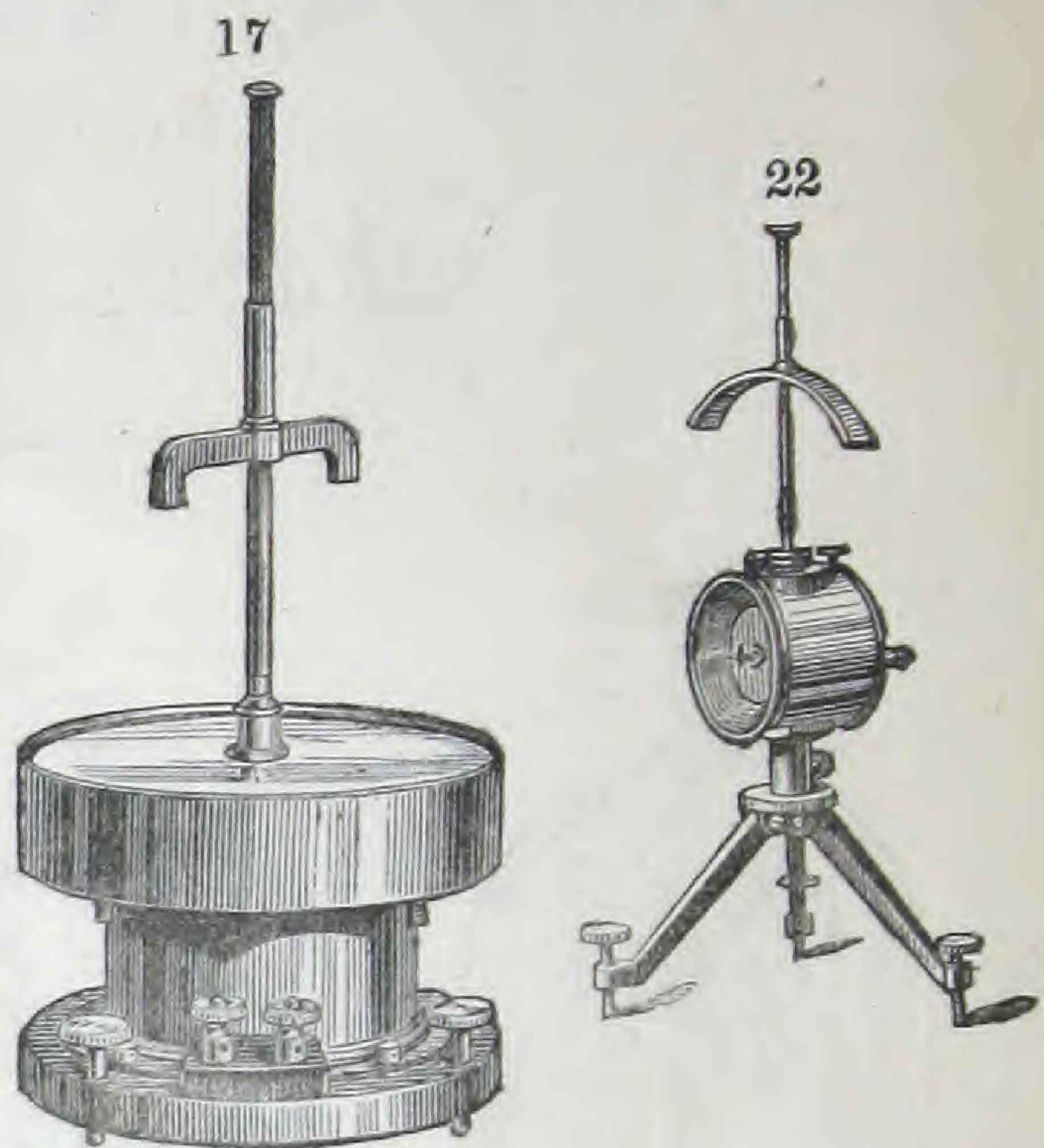
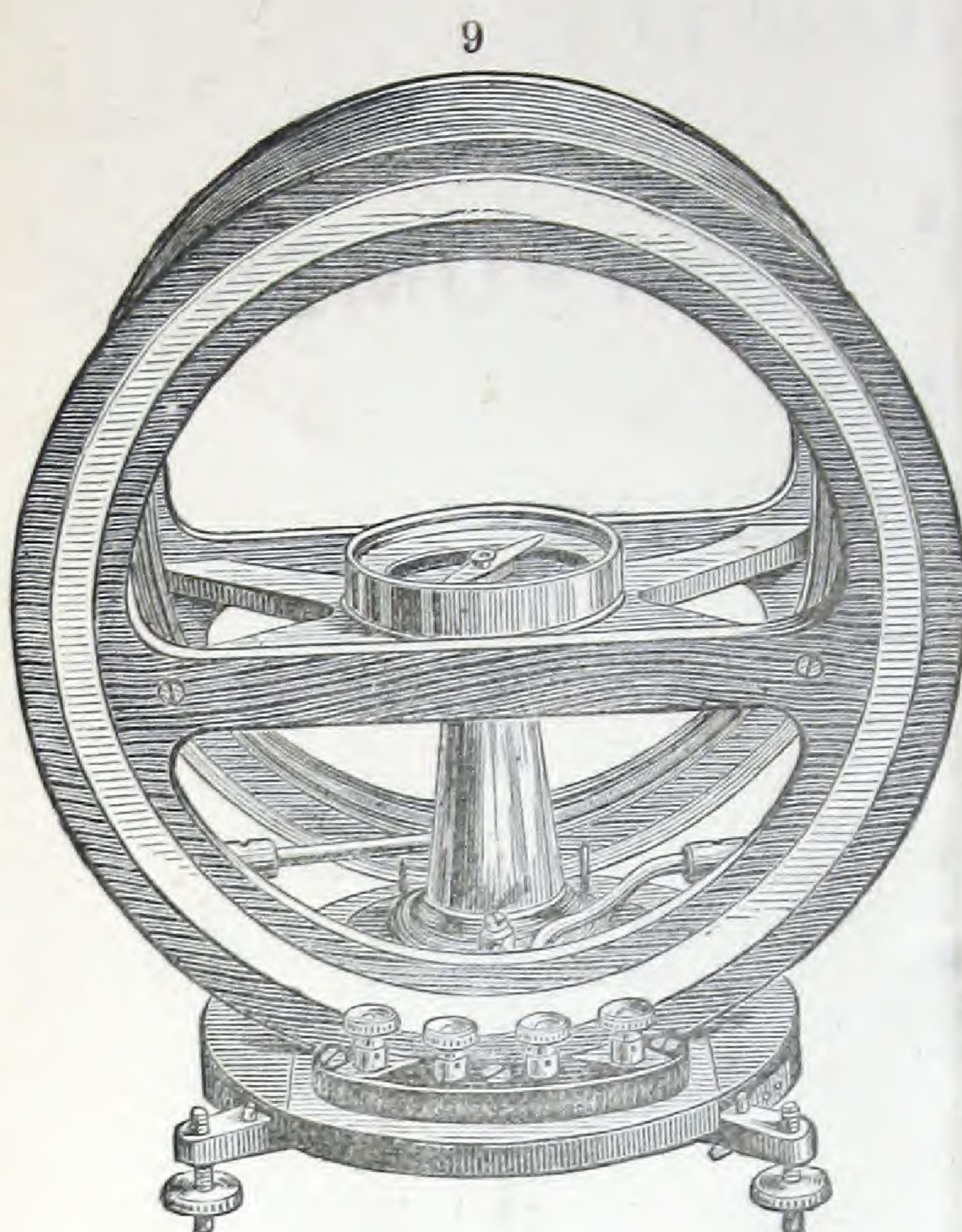


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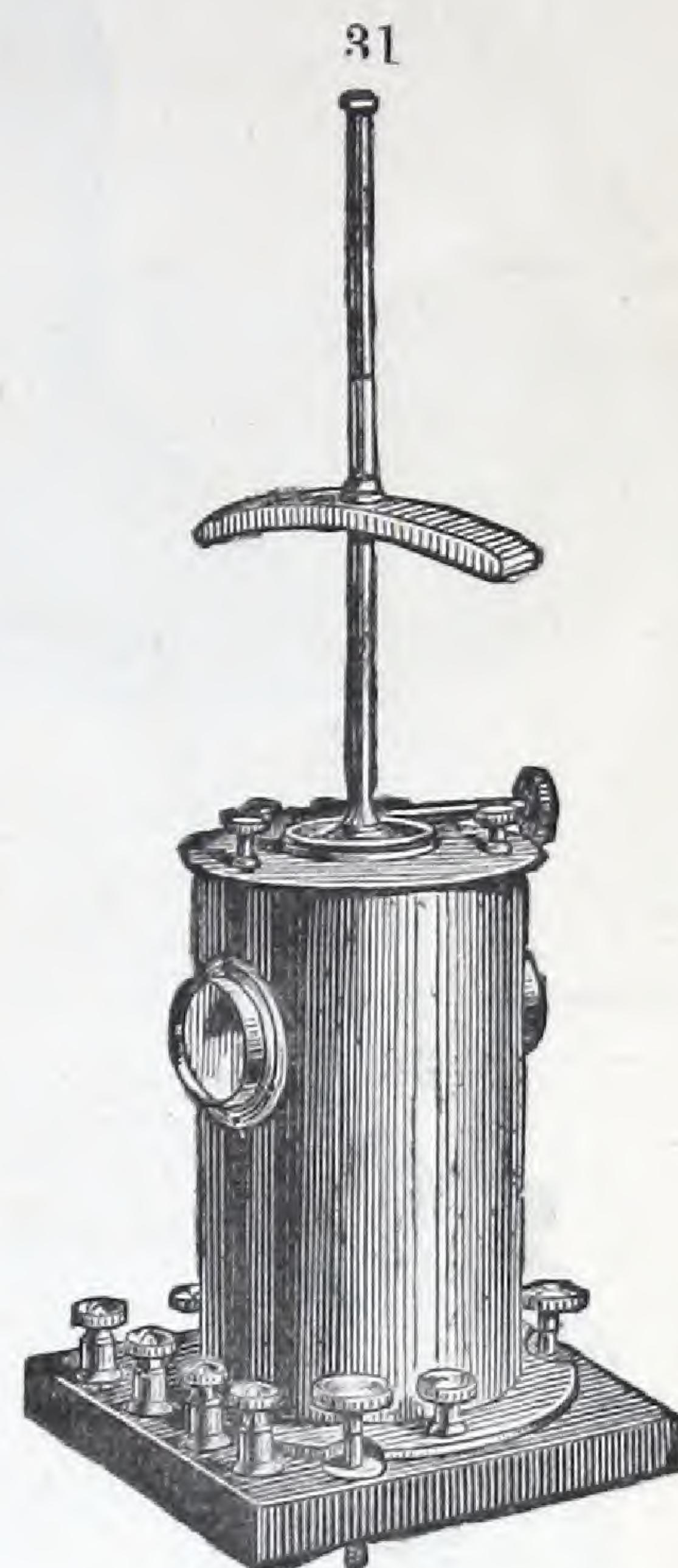
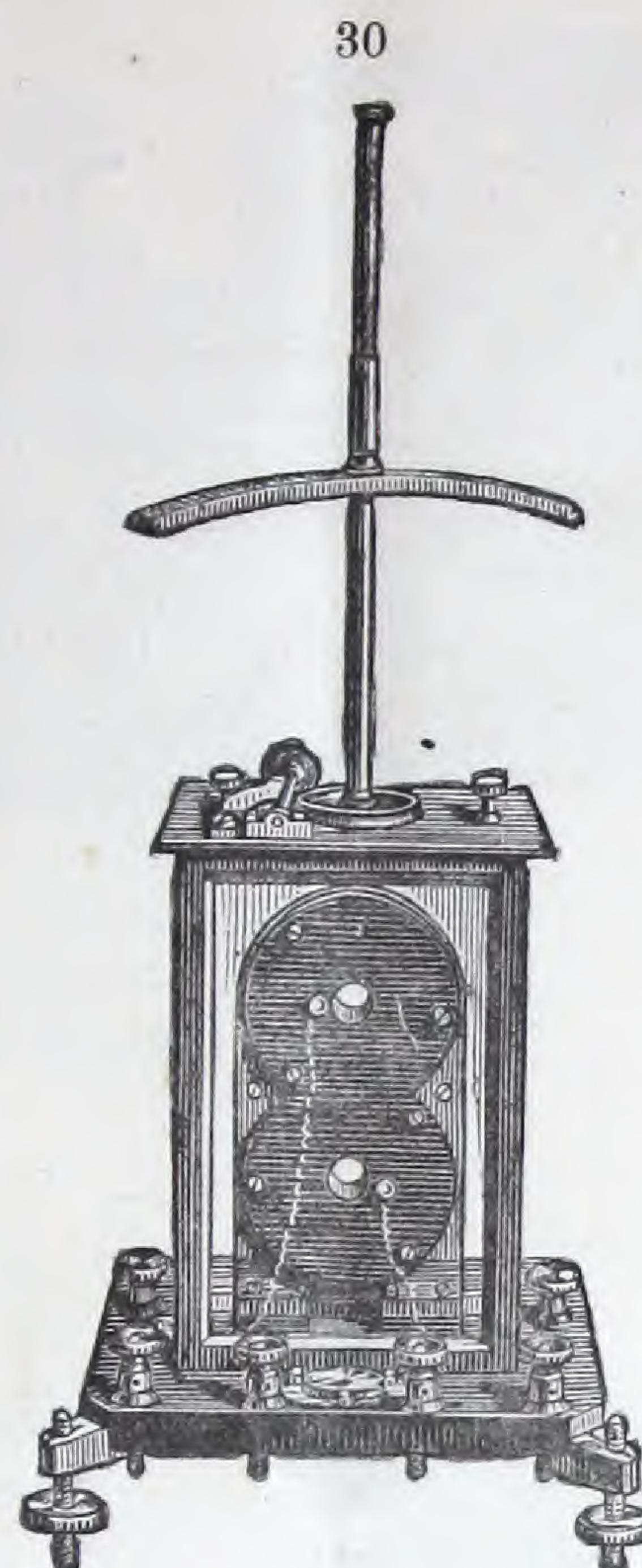
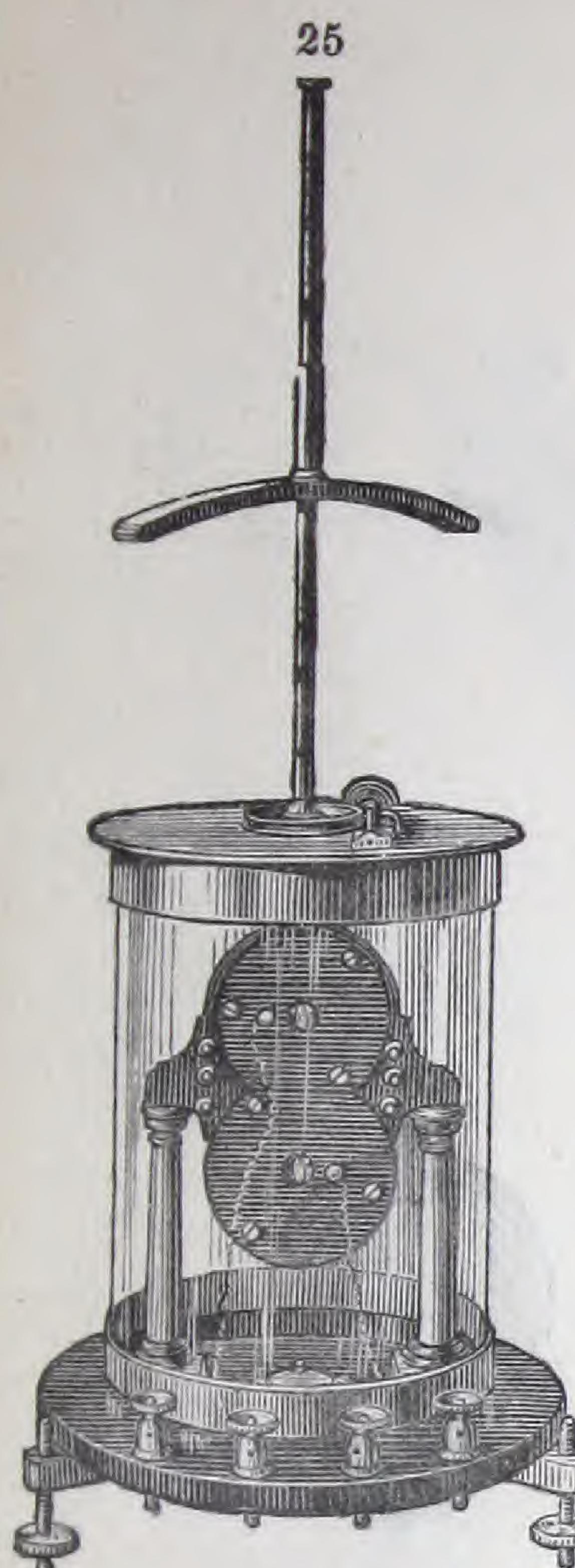
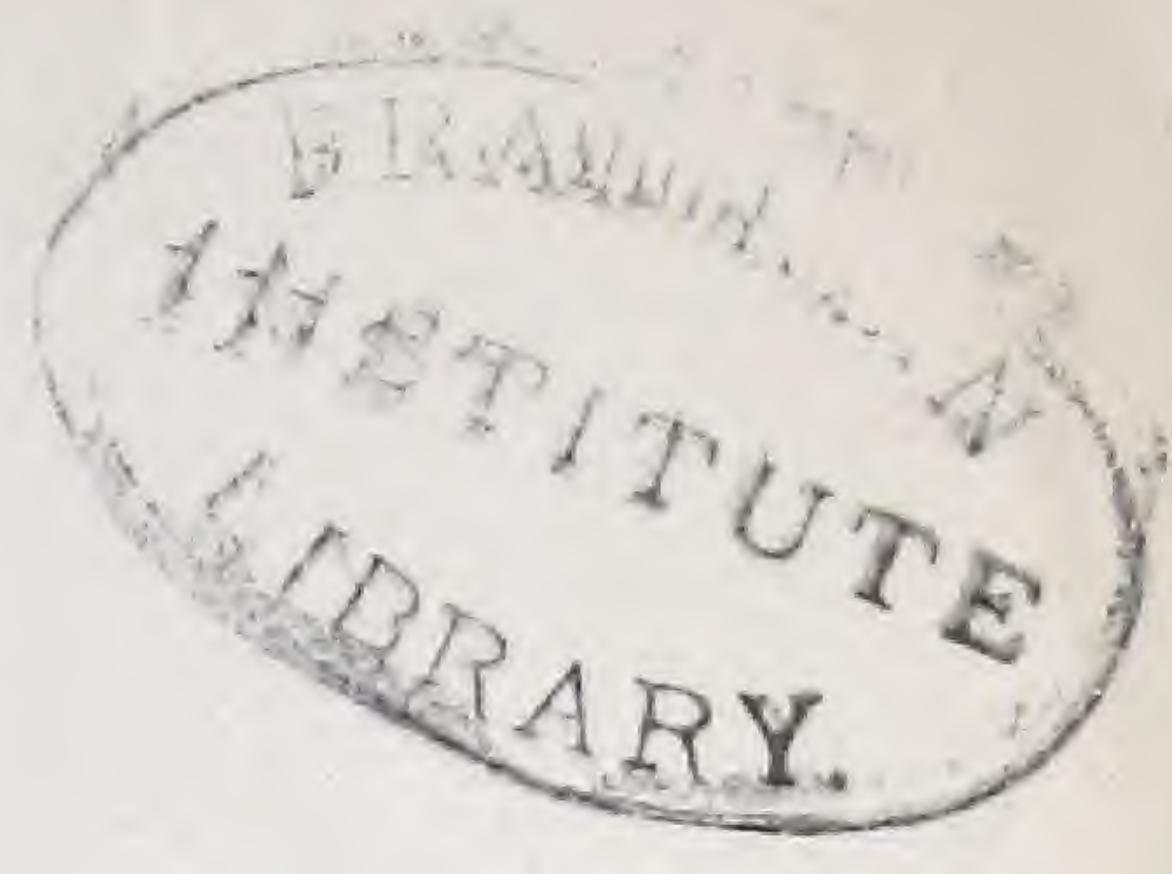


Galvanometers, &c.

	£ s. d.
1. Simple horizontal astatic Galvanometer, with low resistance, suitable for thermo-electric currents and for measurements of conductivity of wires	3 10 0
2. The same with mirror attached	3 15 0
3. The same with fine wire of about 1500 Ohms resistance, without mirror ...	5 5 0
Case for ditto	0 5 0
4. Galvanometer of similar construction, but much larger, for lecture experiments. The needle is prolonged by an index in such a manner that the slightest deviation is visible by an audience	5 5 0
5. Portable Astatic Galvanometer with jewelled centres, upwards of 1000 Ohms resistance, in leather case with small bar magnet	5 5 0
6. Detector Galvanometer with vertical needle	3 3 0
7. Detector Galvanometer with three coils, 2, 10, and 1000 Ohms resistance, Mr. Brown's construction	5 0 0
8. Tangent Galvanometer, one single wire round compass	3 3 0

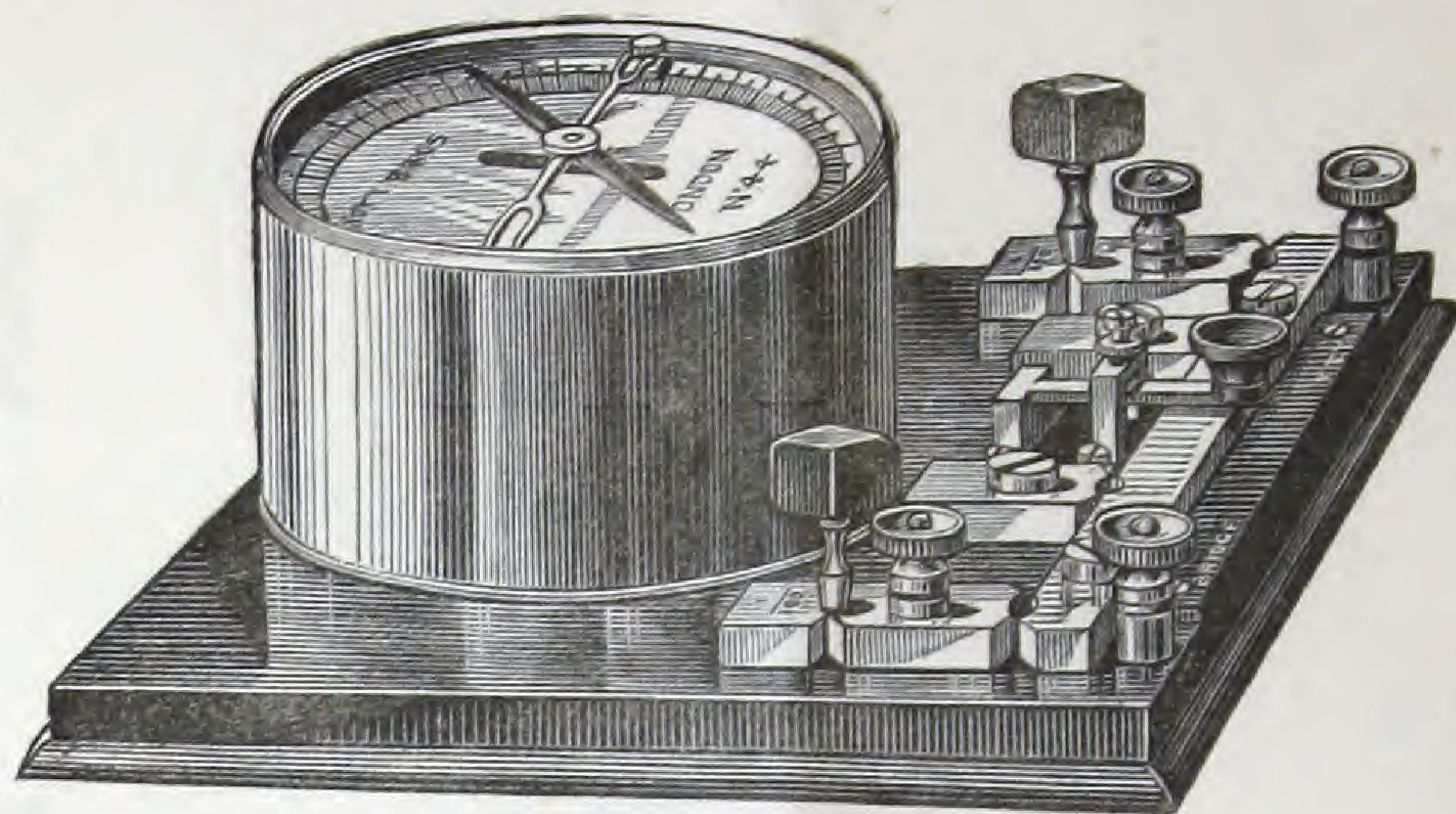


	£	s.	d.
9. Tangent Galvanometer, Gaugain's construction, with four different coils and two needles	...	...	6 10 0
Case for ditto	...	...	0 8 0
10. Small Tangent Galvanometer	...	...	2 10 0
11. Tangent Galvanometer with needle, suspended by silk from Torsion Head	10	10	0
12. Tangent Galvanometer, Indian Telegraph Service pattern	...	7 10	0
13. Tangent and Sine Galvanometer combined, with set of Shunts	...	14 0	0
14. Projection Galvanometers	...	...	...
15. Electro Dynamometers, constructed according to Weber, Helmholtz, and others	...	from £15 15s. to	75 0 0
16. Reading Telescope, for use with above, or for Galvanometers generally	...	15 15	0
17. Horizontal Astatic Galvanometer, of high resistance, chiefly used at Telegraph Stations abroad, with set of Shunts	...	16 10	0
18. Galvanometer for absolute determinations	...	10 10	0
19. Torsion Balance, superior construction, may also be used for experiments on magnetic force	...	6 10	0
20. The same, of still larger dimensions	...	...	...
21. Reflecting Galvanometer, on Sir William Thomson's principle, with short thick wire coil, for thermo-electric currents, without lamp and scale	...	5 5	0
22. Sir W. Thomson's Reflecting Galvanometer, with astatic needles, tripod pattern, short thick wire, with lampstand and scale	...	10 10	0

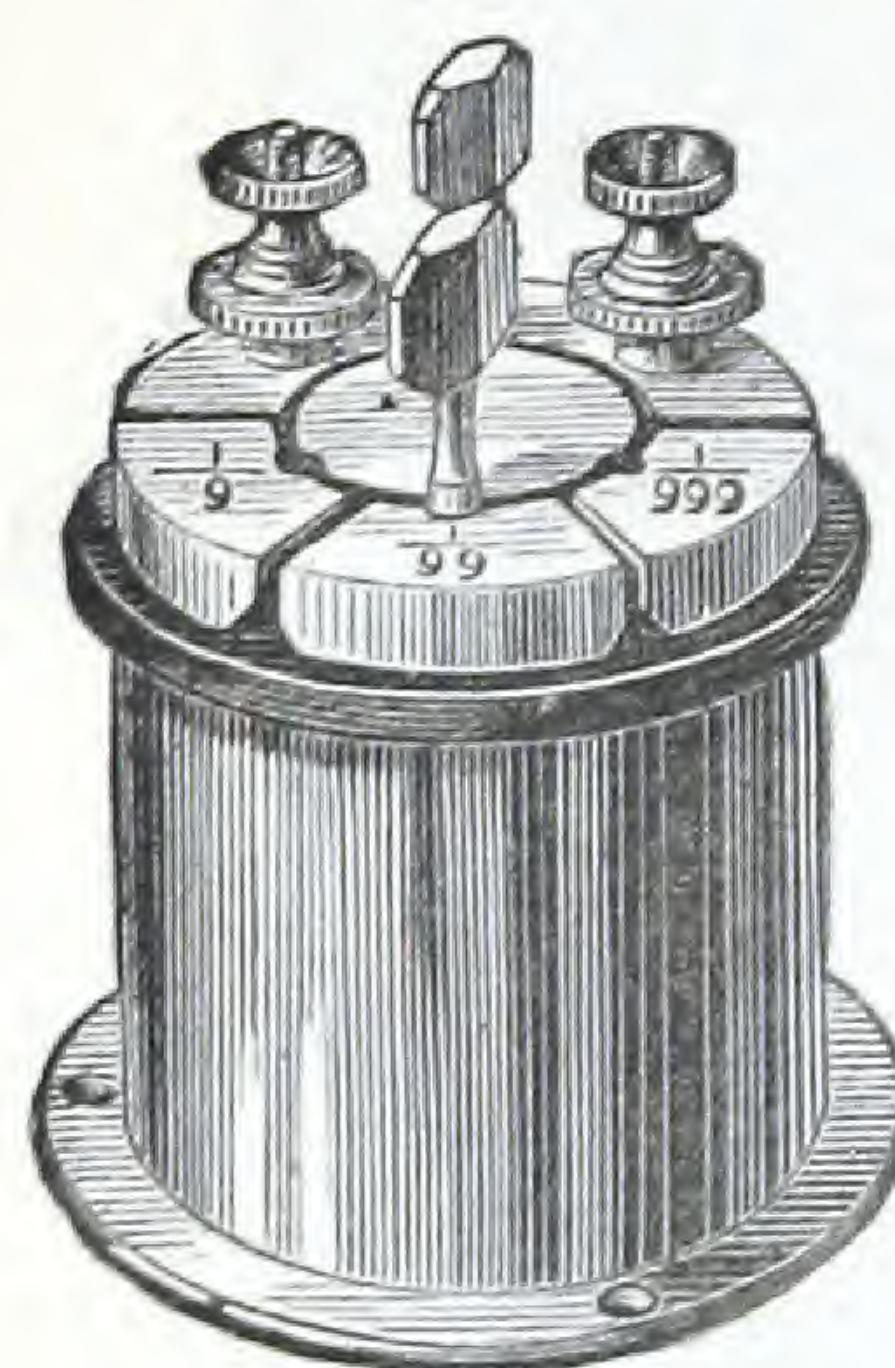


	£	s.	d.
23. The same, with about 2,500 Ohms resistance ... ... ... ... ...	... 12	12	0
24. Tripod Differential Galvanometers of high and low resistance ... ...	...	...	...
25. Thomson's Reflecting Astatic Galvanometer, with four coils, upwards of 5000 Ohm's resistance, with lampstand and scale. Glass cylinder pattern	18	18	0
26. The same, differential ... ... ... ... ... ... ...	... 21	10	0
27. The same, with four coils, two of thick and two of fine wire... ...	... 18	10	0
28. The same, with four coils, two of thick and two of fine wire. The fine wire coils differentially wound ... ... ... ... ...	... 21	0	0
29. The same, in German silver or platinum silver alloy wires ... ...	...	...	...
30. Reflecting Astatic Galvanometer. Electrically the same as No. 25, square pattern ... ... ... ... ... ... ...	... 20	0	0
31. The same, round brass pattern, especially used for abroad, and for boat service, packs in smaller boxes, and is not so liable to breakage ...	18	18	0
32. Large Astatic Galvanometers of very high resistance, to be used singly, differentially, or in multiple arc from	30	0	0
33. Square wooden case Reflecting Galvanometers, high or low resistance from £5 5s. to	7	10	0
34. Square wooden case Reflecting Galvanometer, larger than the above, two pairs of coils, high and low resistance 10	10	0

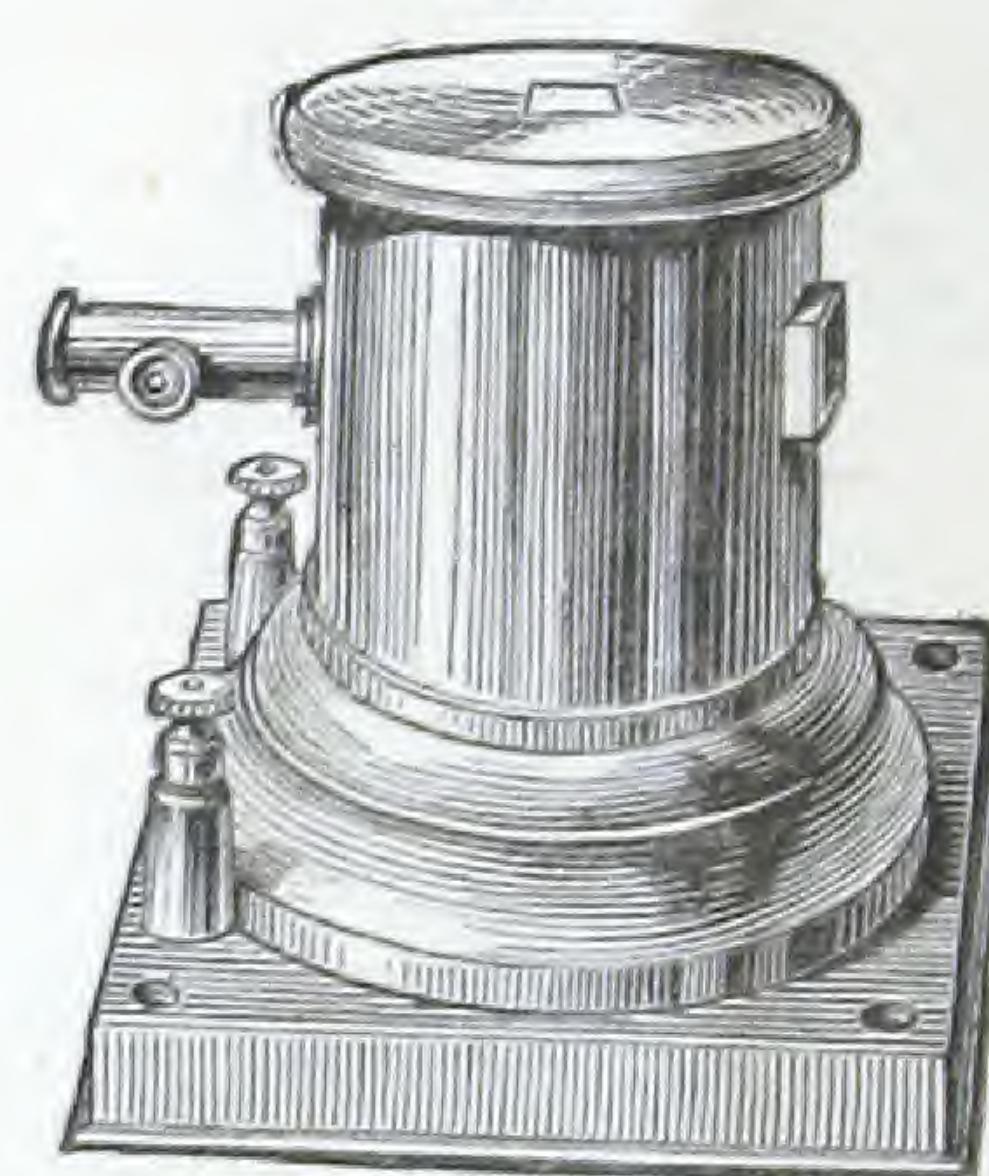
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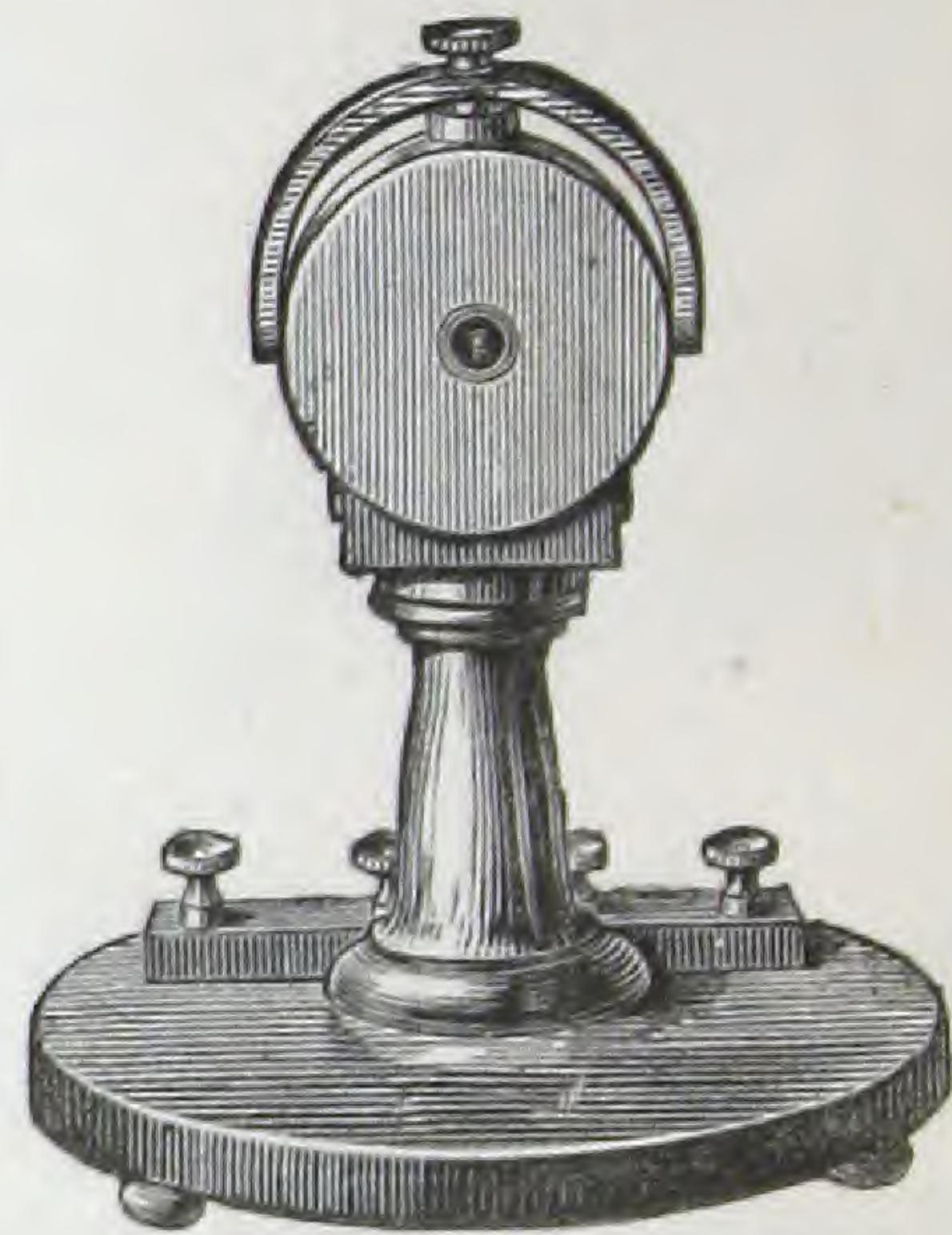
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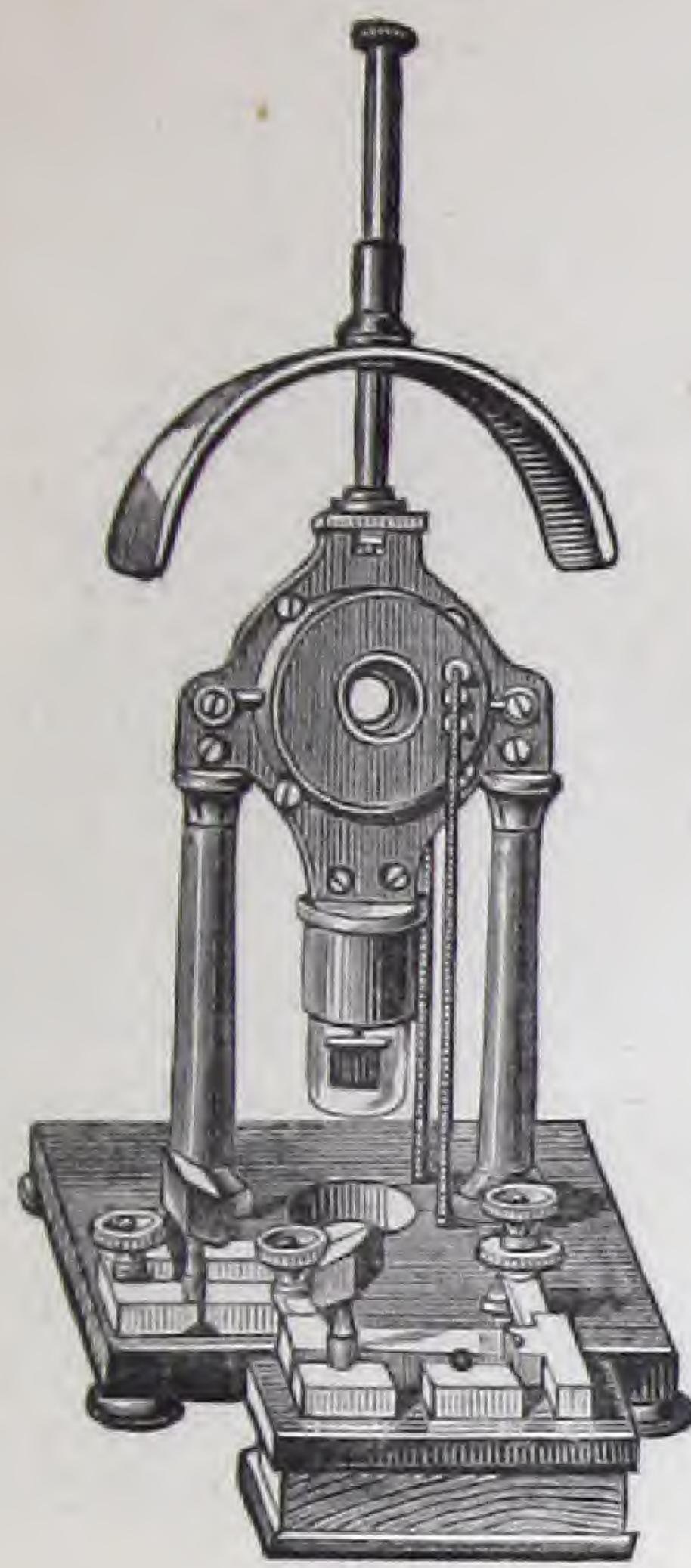
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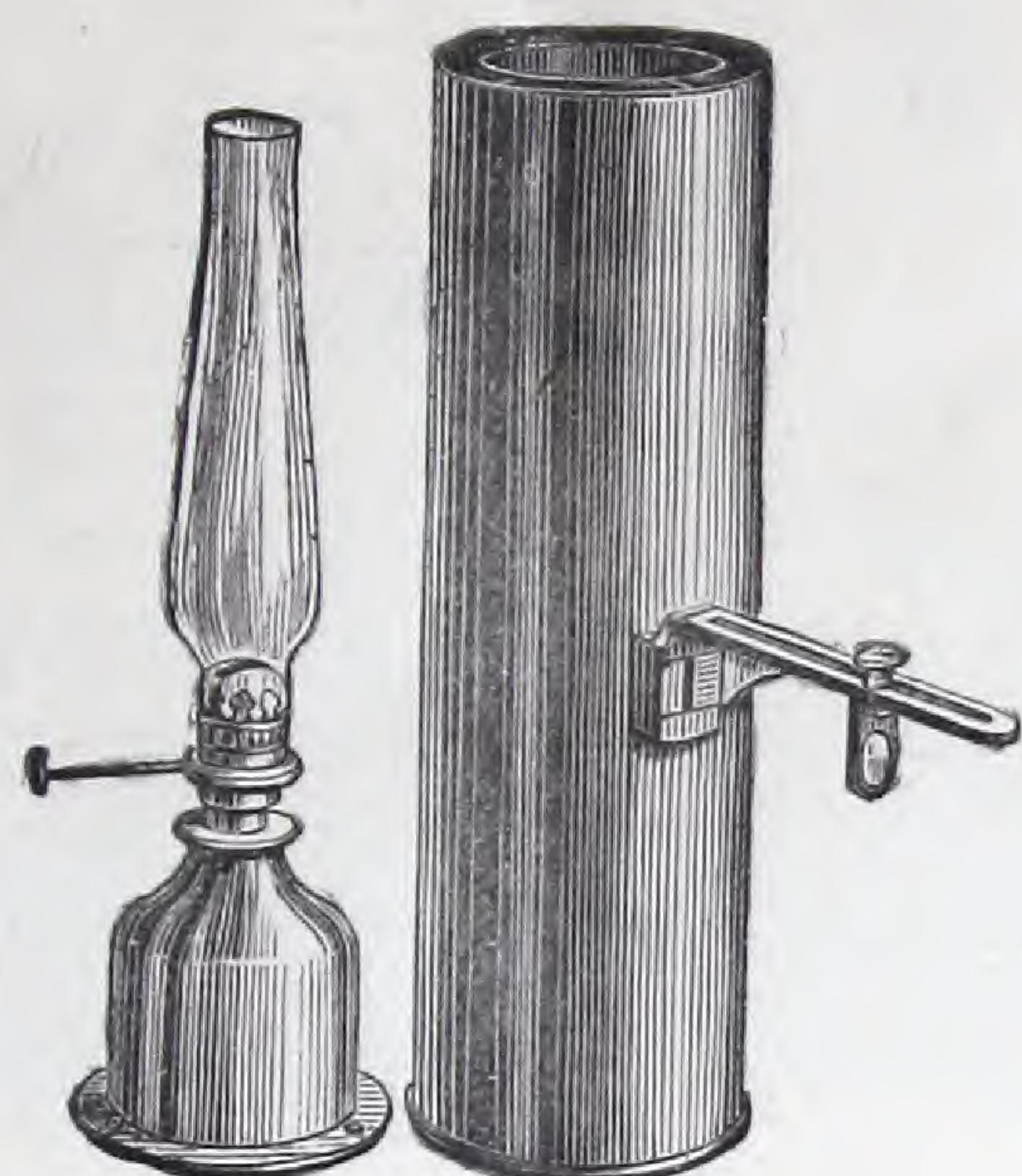
£ s. d.

35. Sir W. Thomson's Marine Galvanometer, about 7000 Ohms resistance, lampstand and scale	24 0 0
36. The same, large size, upwards of 20,000 Ohms resistance	... ... ...	30 0 0
37. Extra suspended and adjusted Slide for ditto	... ... ...	1 1 0
38. Set of Shunts for any of the above Galvanometers, $\frac{1}{9}$, $\frac{1}{99}$, and $\frac{1}{999}$, the resistance of the Galvanometer	... ... ... ... ...	3 10 0
39. Set of Shunts, Post Office pattern	... ... ... ... ...	4 4 0
40. Sliding Shunts, chiefly used with large Marine Galvanometer, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ — $\frac{1}{11}$, the resistance of the Galvanometer	... ... ... ... ...	18 18 0
41. Latimer Clark's Differential Galvanometer	... ... ... ... ...	12 12 0
42. Differential Galvanometer, low resistance	... ... ... ... ...	7 15 0
43. Dead Beat Galvanometers, single and differential	... ...	from £8 to 12 0 0
44. Water Mirror Galvanometer	... ... ... ... ...	12 12 0
45. The same, differential	... ... ... ... ...	15 15 0
46. Speaking Galvanometer for Sub-Marine Cables, from 1000 to 2000 Ohms resistance from £7 10s. to 8 10 0

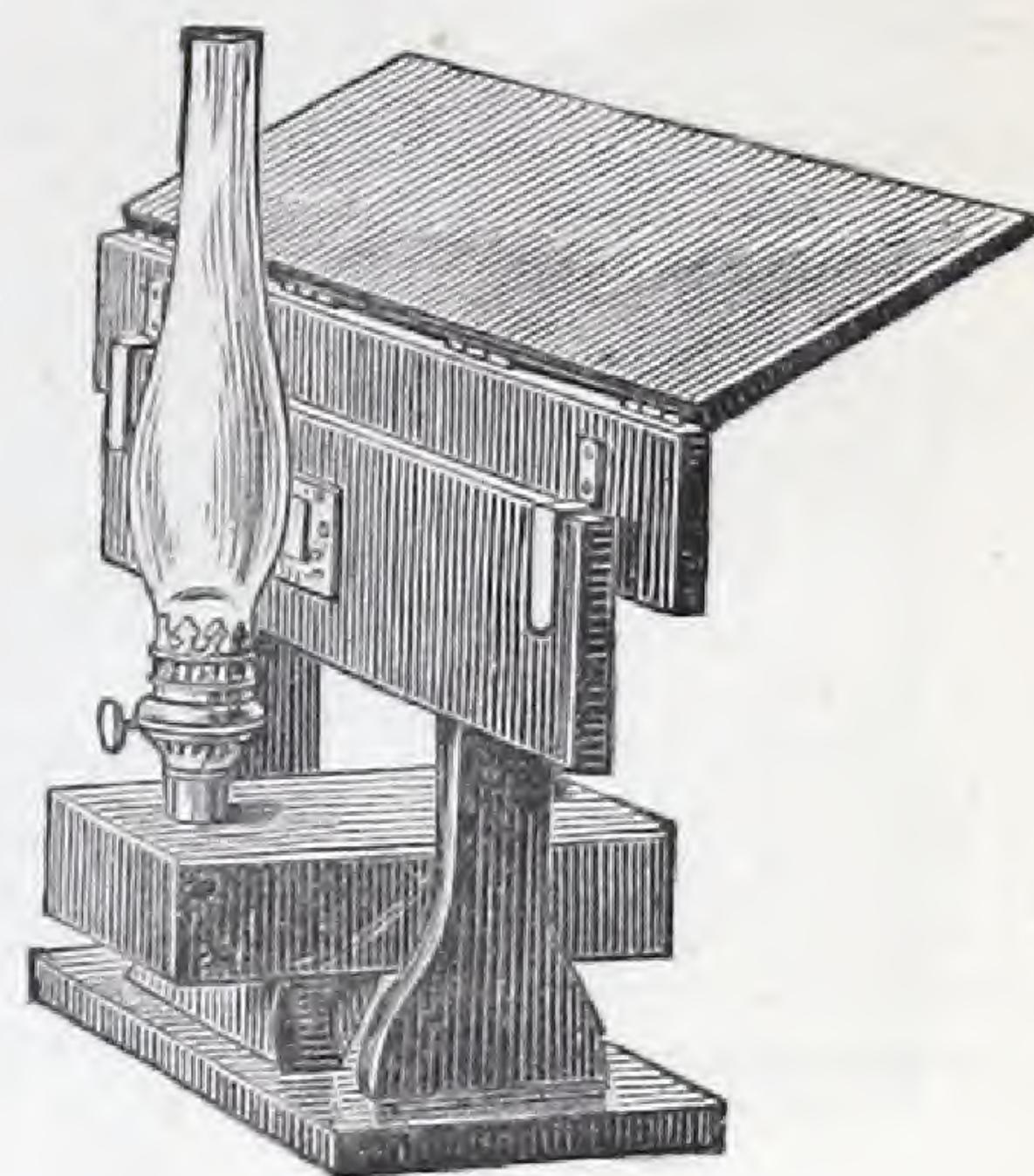
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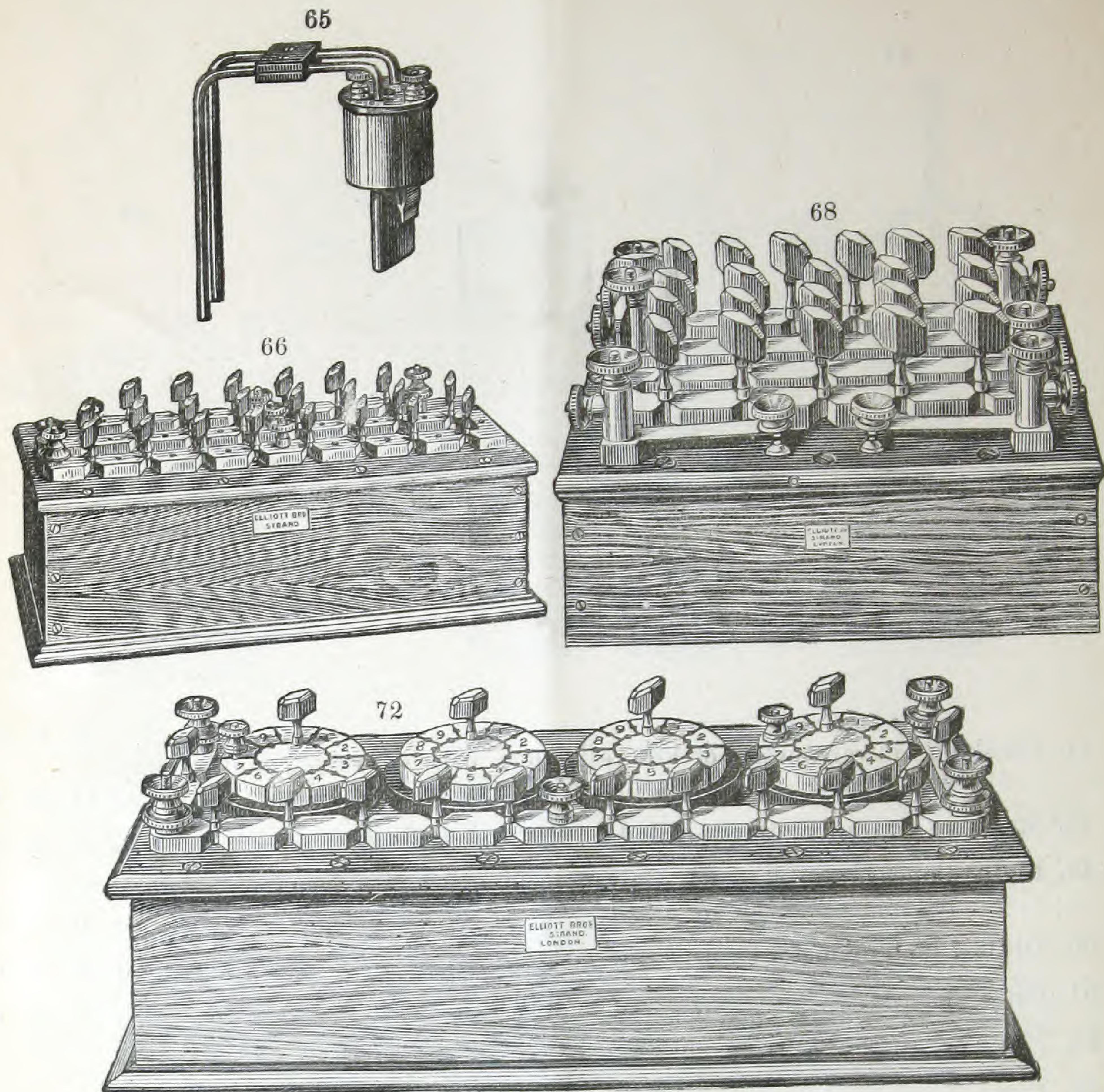
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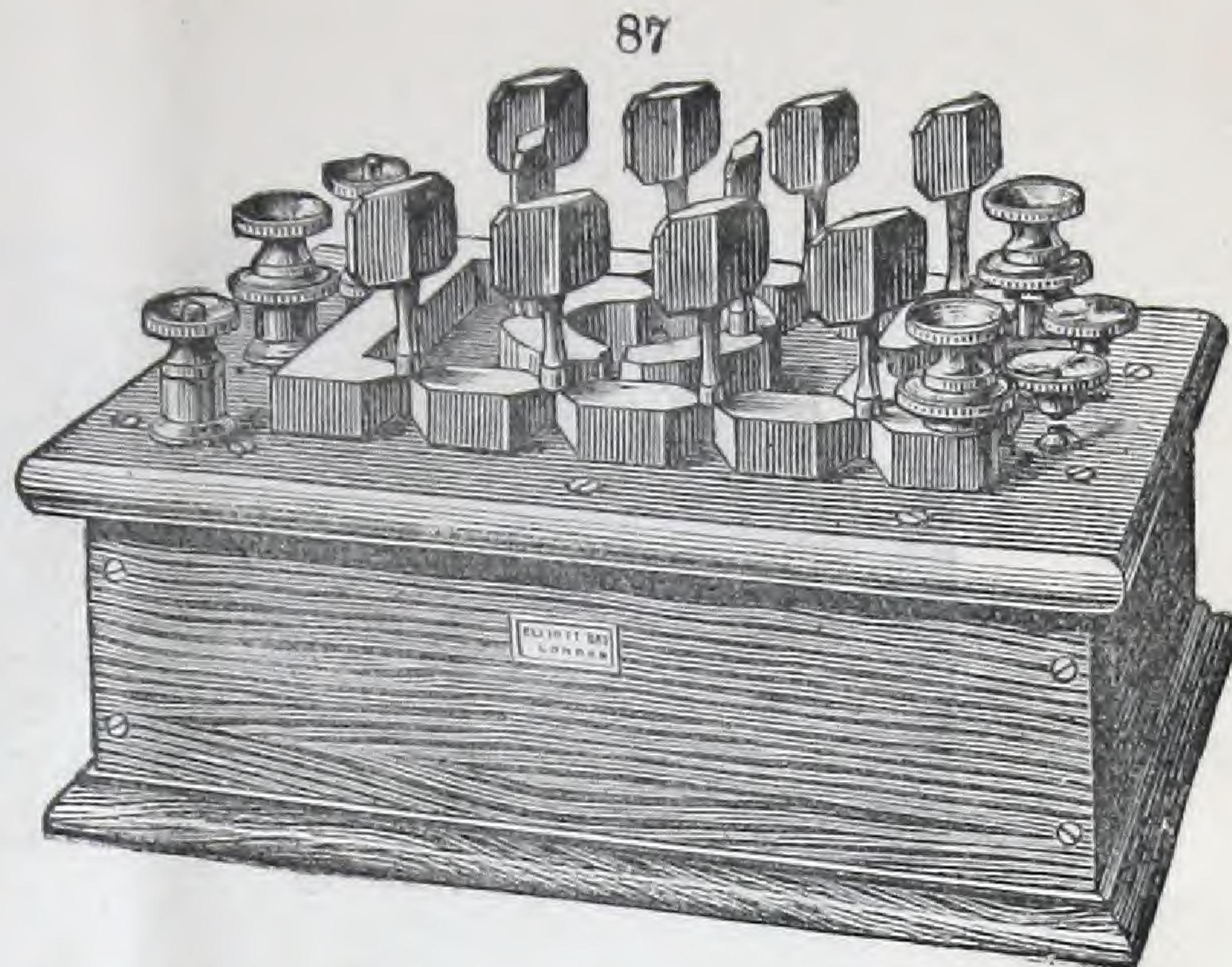
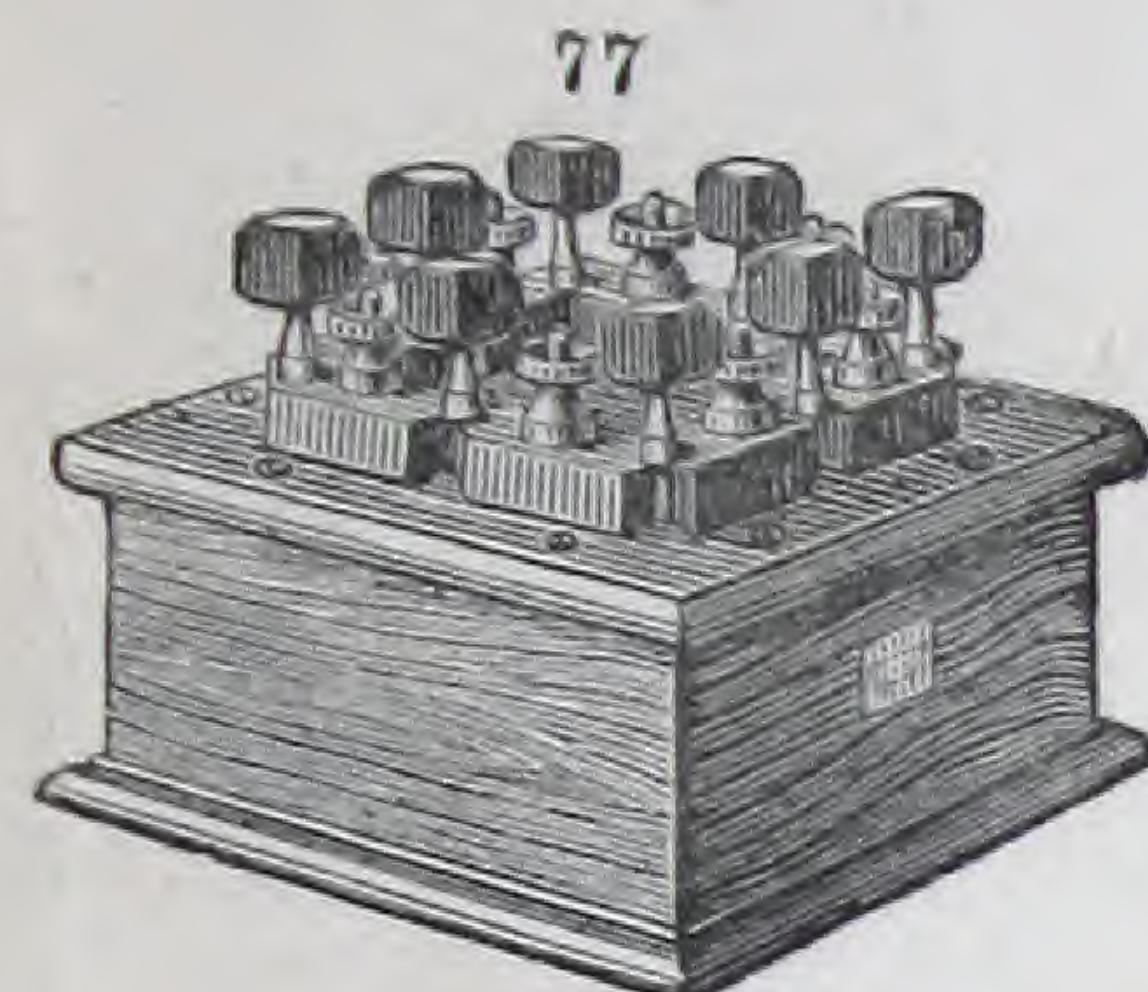


	£	s.	d.
47. Speaking Galvanometer, of low resistance, with oil vessel, shunts, lamp- stand and scale	11 10 0
48. Speaking Galvanometer, adjusted for use on board ship ...	...	...	14 0 0
49. Light Concave Mirrors for Galvanometers, 3 and 4 feet focus, $\frac{3}{8}$ inch diameter ...	...	...	0 2 6
50. Ditto, $\frac{3}{4}$ inch diameter	...	...	0 3 6
51. Ditto, $\frac{1}{10}$ " "	...	...	0 3 6
52. Plane or Concave Mirrors, suspended for Galvanometers ...	...	...	...
53. Lamp, with double screen, slide, and adjustable lens, to be used with reflecting instruments generally ...	...	...	1 5 0
54. Scale Stands for Speaking Galvanometers ...	...	...	1 1 0
55. Set of Lamp Apparatus for Speaking Galvanometers, consisting of brass lamp with copper chimney, condensing lens on brass stand, and brass scale stand ...	...	...	3 15 0
56. Lampstand and Scale in case complete, for oil vessel Galvanometer ...	...	2 11	6
57. Ditto, for Marine Galvanometer ...	...	3	0 0
58. Ditto, for Tripod Galvanometer ...	...	2	8 0
59. Ditto, for Glass Cylinder Galvanometer ...	...	2	8 6
60. Ditto, for square or round brass case Galvanometers... Rack and pinion fixed to the above scale stands, for moving the scale horizontally ...	...	2 12	6
	0	7	6
61. New pattern (black) Lampstand and Scale, complete in case ...	...	1 18	6
62. The same, with tube and lens ...	...	2 14	0

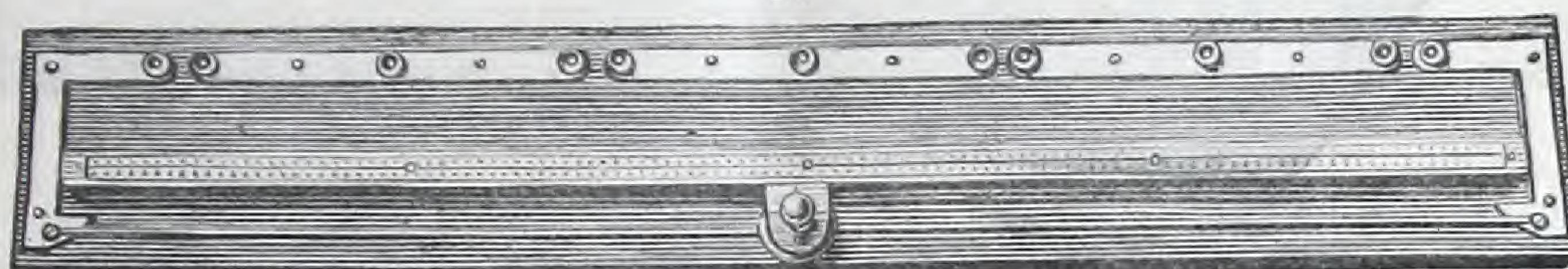


Resistance Coils, &c.

		£ s. d.
63.	Single bobbins accurately adjusted ... ... ... ...	... 15s. to 1 1 0
64.	Copy of B. A. Unit or Ohm, as issued by the Committee ... ...	... 3 10 0
65.	The same, flat form, with thermo-electric couple, one junction inside the coil, the other junction outside the case, as suggested by Professor Chrystal ... ... ... ...	... ... ... ... 4 10 0
66.	Set of Resistance Coils, 16 bobbins, 10,000 Ohms in the aggregate, with a Wheatstone's bridge attached, three pairs of equal resistances, two tens, two hundreds, and two thousands, in German silver wire	36 0 0
67.	Set of Resistance Coils, same construction as the above, much more portable, the wire made of platinum silver alloy	34 0 0
68.	Set of Resistance Coils, with bridge, battery, key, and galvanometer key, Post Office pattern, the wire of platinum silver alloy	26 0 0
69.	Set of Resistance Coils, 10,000 Ohms, without bridge	18 0 0
70.	Set of Resistance Coils, 1 to 1000 Ohms	8 10 0
71.	Small set of Resistance Coils, 1 to 10,000 Ohms can be used as a Shunt ...	13 0 0
72.	Large Set of Resistance Coils, in German silver wire, extra thick, dial pattern arranged in units, tens, hundreds, and thousands, with four pairs of proportional coils	48 0 0

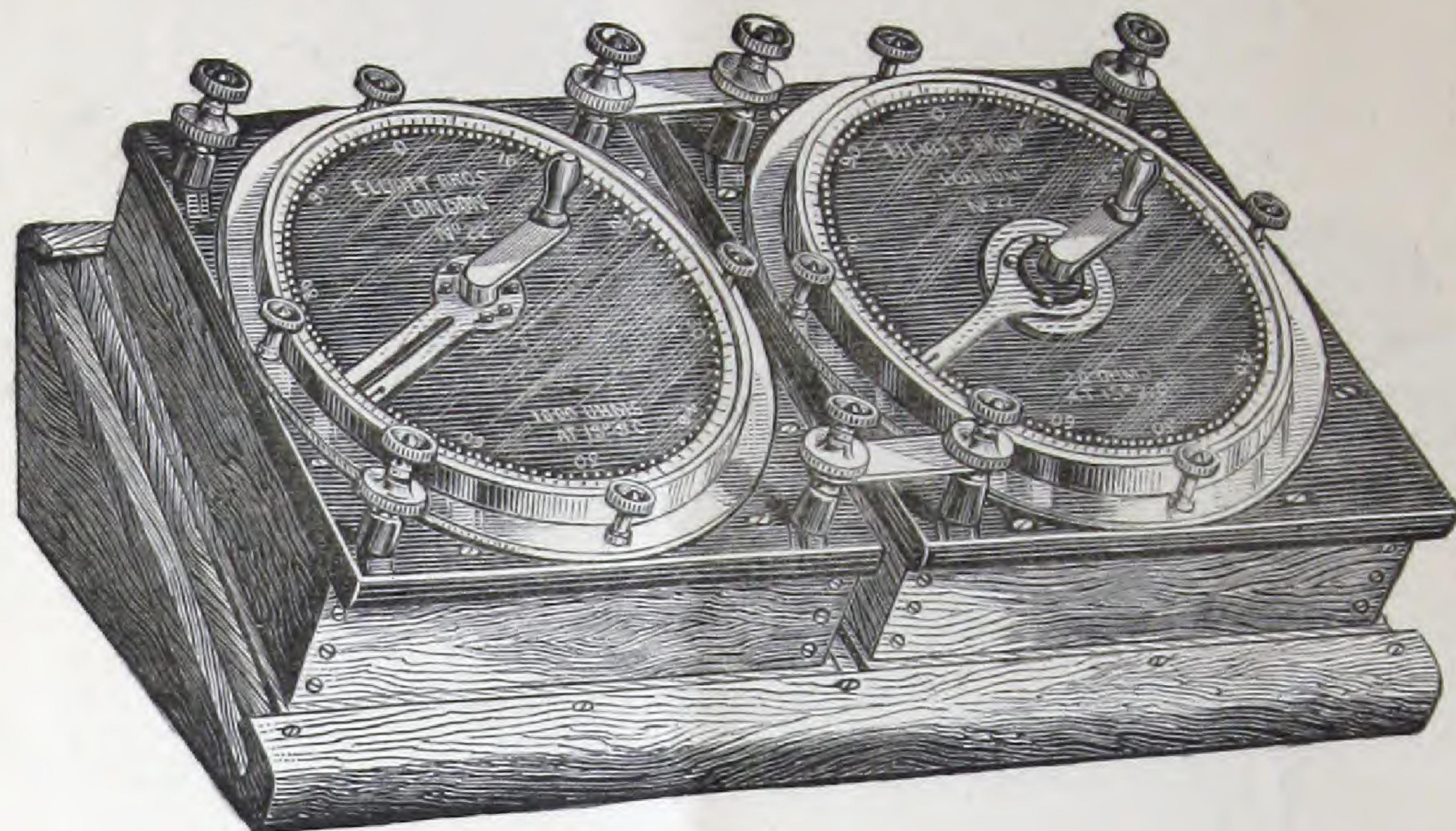


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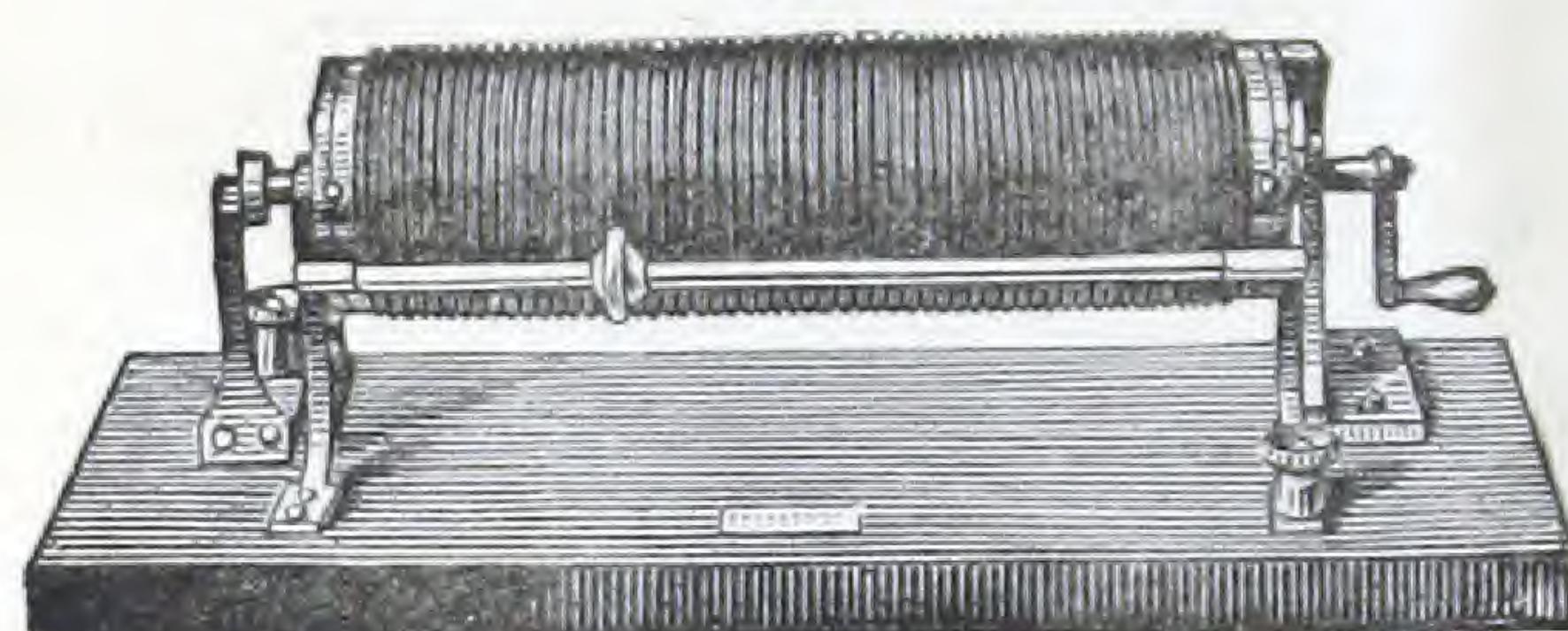


	£	s.	d
73. Resistance Coil of a similar construction, but with five dials	56	0	0
74. Resistance Coils, platinum silver wire, dial pattern, bridge separate, with thermo coil of 100 Ohms, as arranged by Mr. Hockin	45	0	0
75. Resistance Coil of similar construction, fitted with thermo bobbin, &c., as arranged by Mr. Taylor	48	0	0
76. Resistance Coils of similar construction, with five dials and proportional coils, also fitted with commutator, travelling plugs, and wire and slide for Wheatstone's bridge arrangement	60	0	0
77. Set of Resistance Coils, 100,000 Ohms in four coils, platinum silver alloy wire	12	0	0
78. Set of Resistance Coils, 100,000 Ohms, and two bobbins	10	0	0
79. Set of Resistance Coils in platinum silver alloy wire, 400,000 Ohms resistance	30	0	0
80. Megohm Resistance Box, in German silver wire, with sub-divisions, the sub-divisions not adjusted to any definite resistance, but the whole adjusted to one megohm, simplest form	45	0	0
81. Megohm in German silver wire, with five sub-divisions, each accurately adjusted to 200,000 Ohms, superior construction	75	0	0
82. The same in platinum silver alloy wire	80	0	0
83. Resistance Box of one Ohm, with four sub-divisions, .5, .2, .2, .1 ...	4	4	0
84. Firing Rheostat	4	10	0
85. New form of above, with thermo element	6	0	0
86. Selenium Resistances, prepared according to Mr. Willoughby Smith's method, from 1 to 500 megohms, in vulcanite case, &c.			
87. Portable Bridge, Preece's pattern, with four pairs of proportional coils, two keys, and reversers	12	0	0
88. Apparatus to measure the conductivity of copper wire, with three standards, 100 inches of pure copper weighing 100 grains, 200 inches of ditto weighing 100 grains, and 300 inches of ditto weighing 100 grains ...	5	5	0
89. Wheatstone's Bridge with divided meter	3	15	0

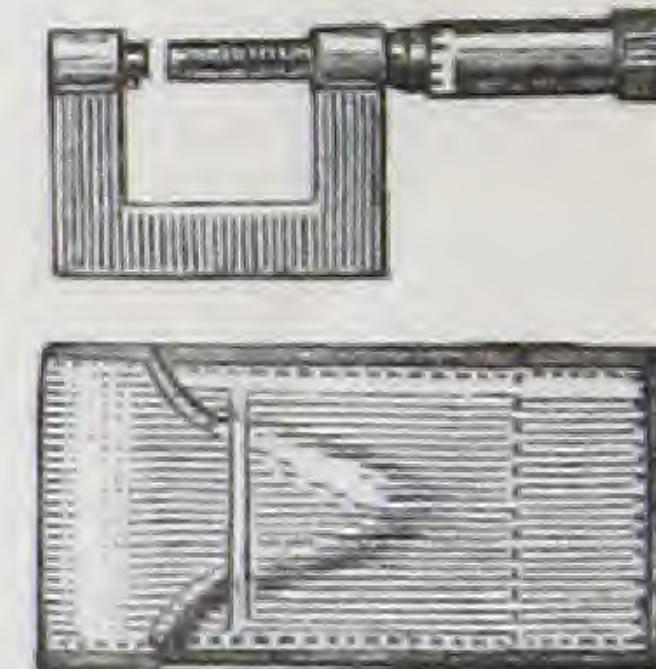
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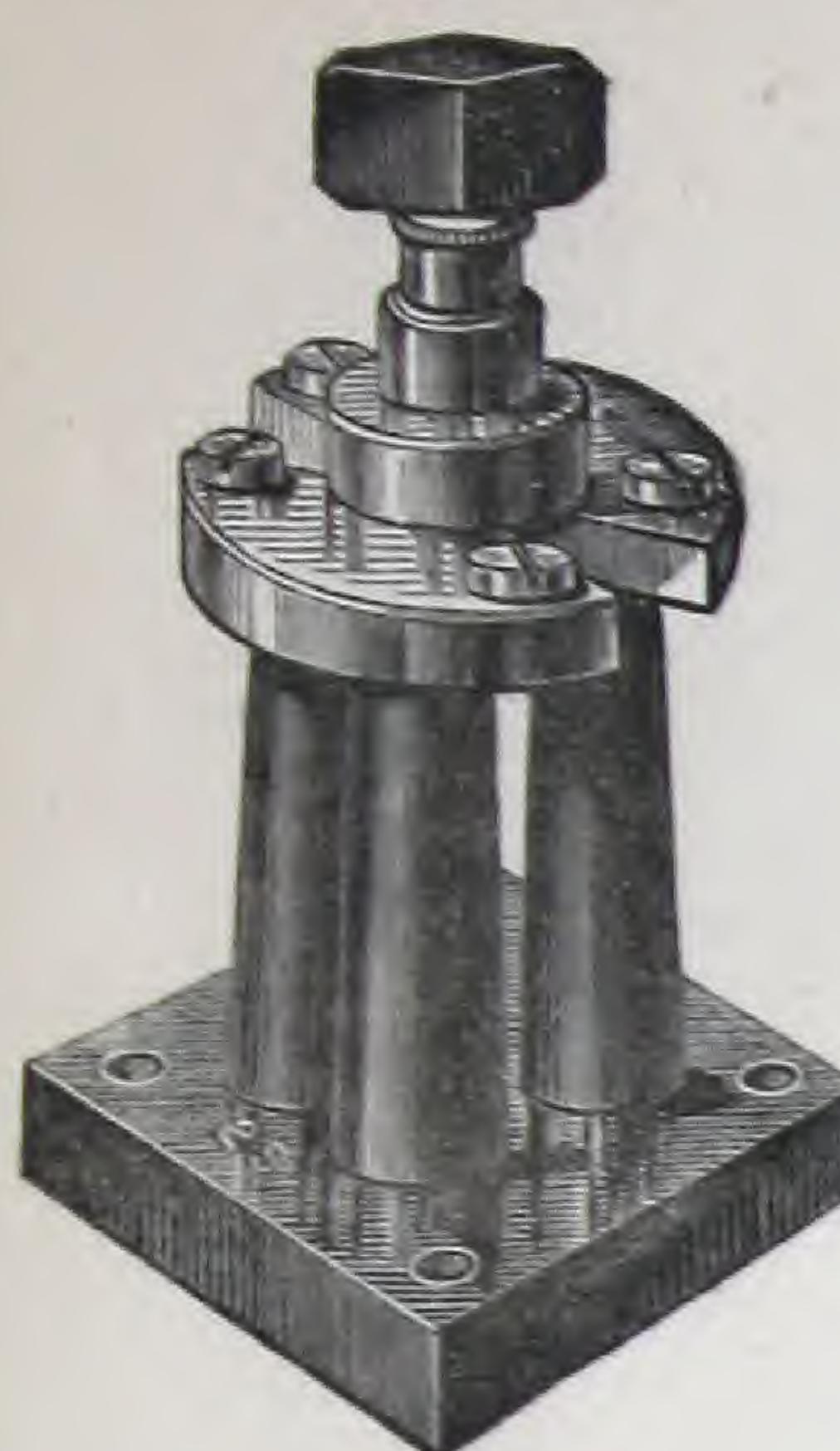
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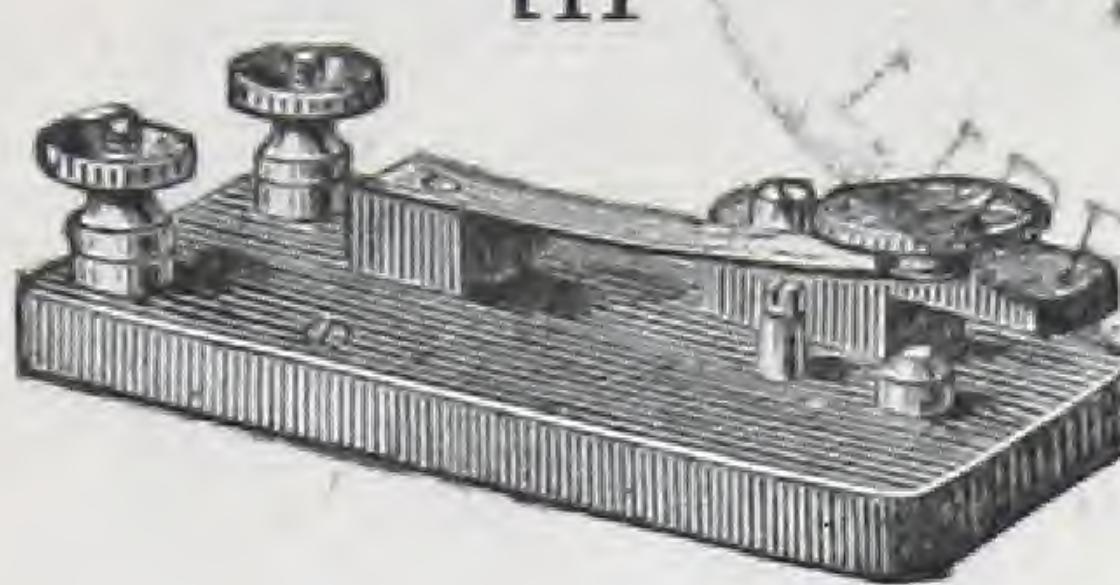
£ s. d.

90. The same, with platinum iridium wire	10 10 0
91. Electric Balances of Vulcanite, B.A. pattern	from 9 9 0	
92. Rheochords of about two Ohms resistance	... ...	... ...	... ...	from 1 5 0	
93. Poggendorff's Rheochord ...	... ...	... ...	... ...	... ...	2 15 0
94. Wheatstone's Rheostat ...	... ...	... ...	... ...	from 3 10 0	
95. Multiple Arcs ... ...	... ...	... ...	... ...	from 0 15 0	
96. Potentiometer, German silver wire ...	... ...	... ...	... ...	... ...	10 10 0
97. Potentiometer with platinum or other wires, superior construction				...	
98. Thomson's Sliding Resistance Coils, circular pattern	... ...	... ...	... ...	80 0 0	
99. Desk, forming stand for above ... ...	... ...	... ...	... ...	2 2 0	
100. Resistance Coil, made of very thick German silver wire, for powerful currents ... ...	... ...	... ...	... ...	30 0 0	
101. Single Empty Bobbins, for experimental purposes ...	... ...	... ...	... ...	from 0 3 6	
102. Matthiessen's Mercury Cups ... ...	... ...	... ...	... ...	0 1 2	
103. Decimal Wire Gauge in German silver to measure $\frac{1}{1000}$ of an inch	... ...	... ...	... ...	1 10 0	
104. The same, larger barrel, to measure $\frac{1}{1000}$ of an inch, or $\frac{1}{100}$ of a mm. ...	... ...	... ...	... ...	1 15 0	
105. The same with Taylor's ratchet arrangement, to ensure uniform pressure	2 5 0				
106. The same, large size, arranged with both English and French measures	3 3 0				

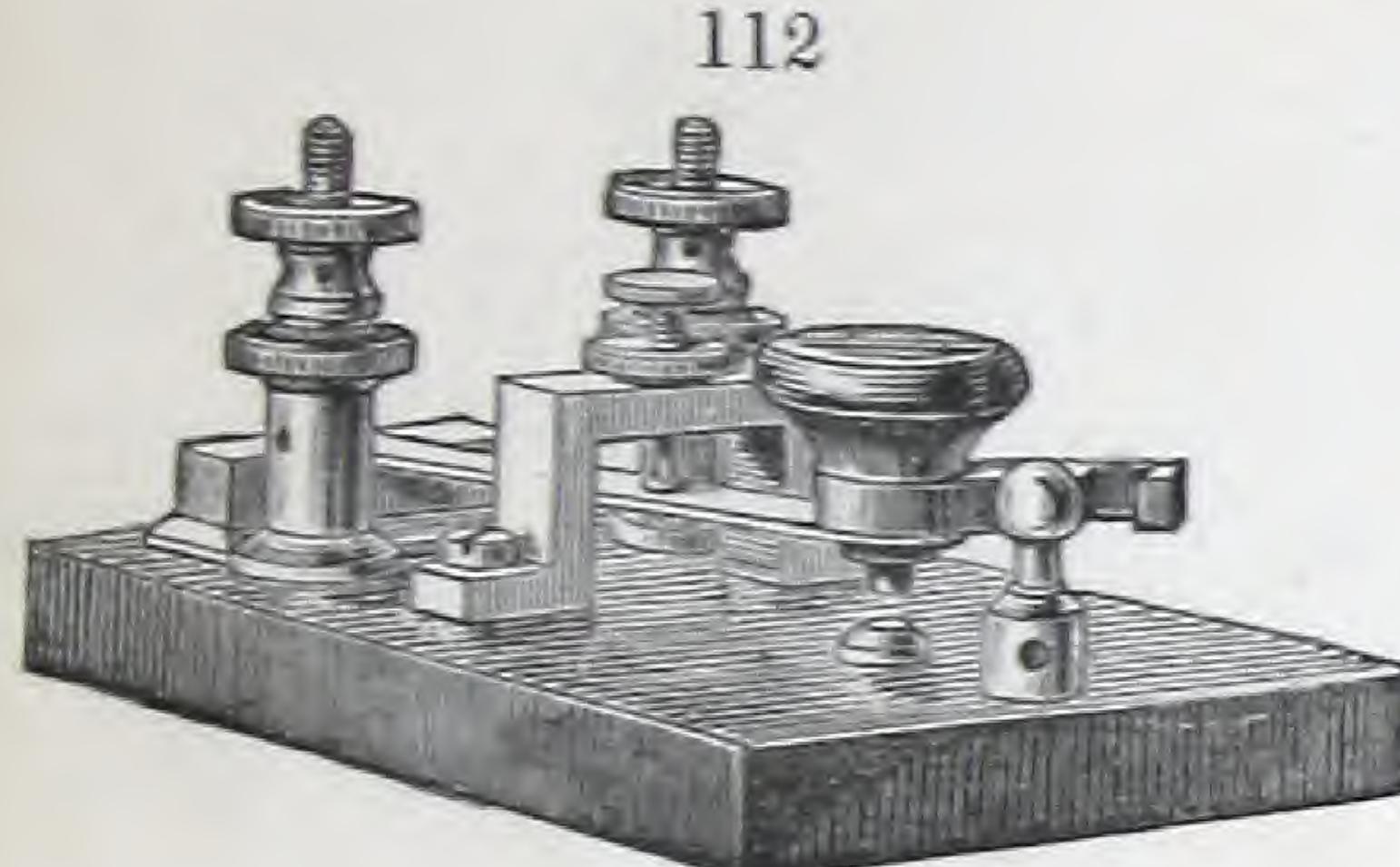
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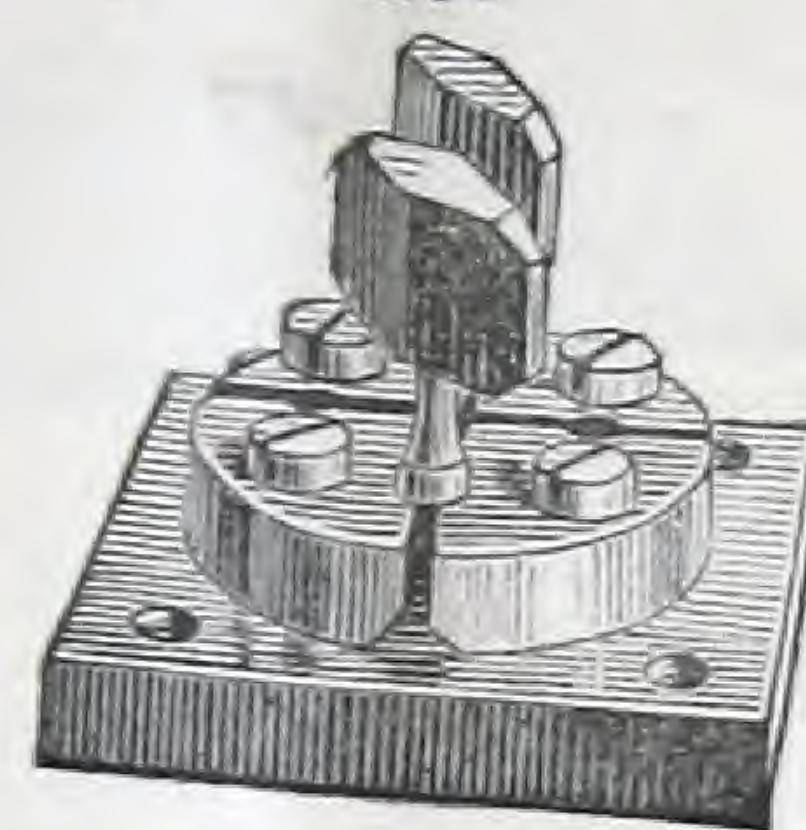
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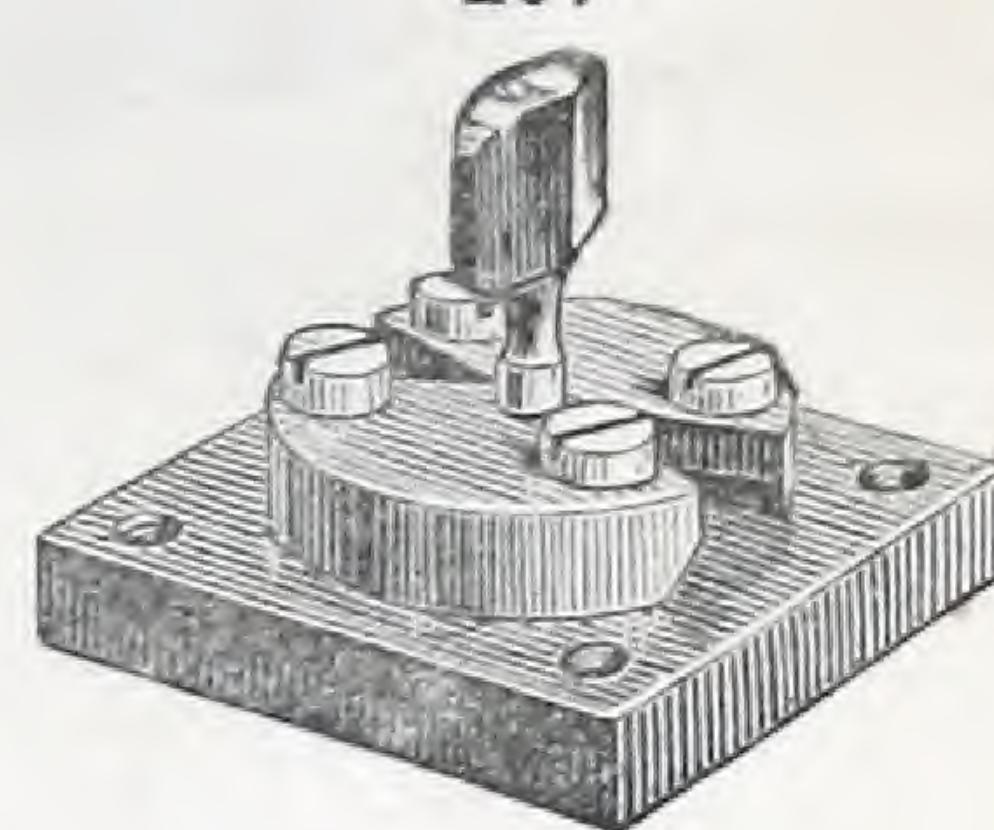
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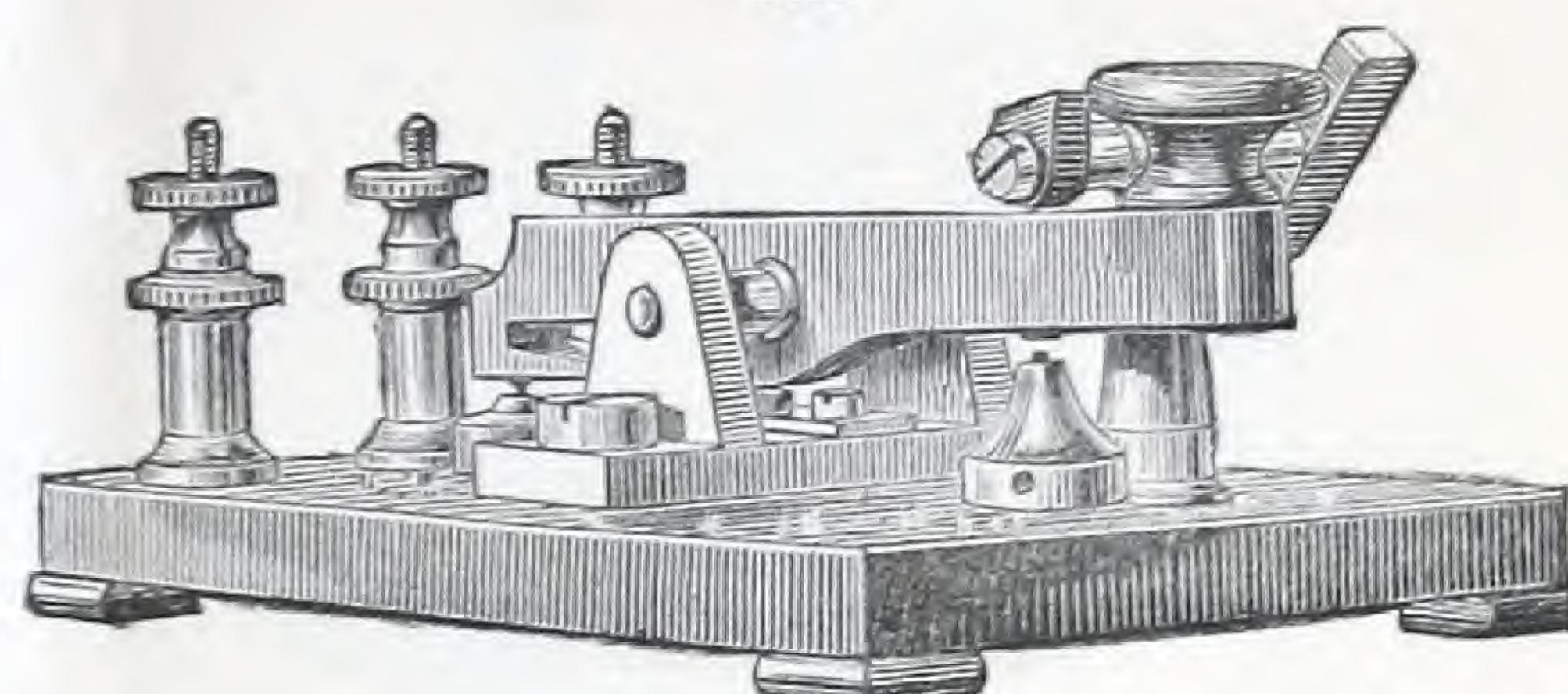
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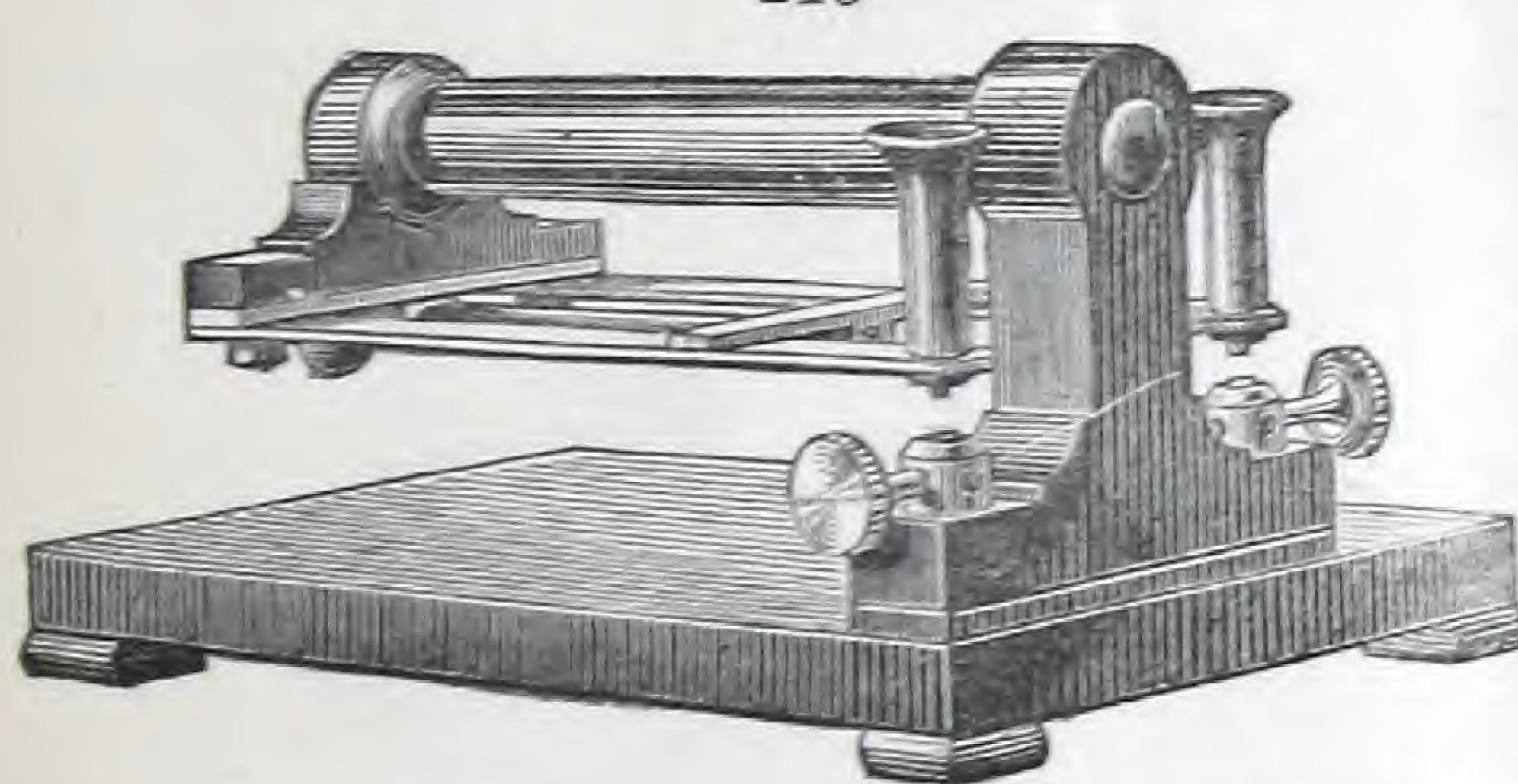
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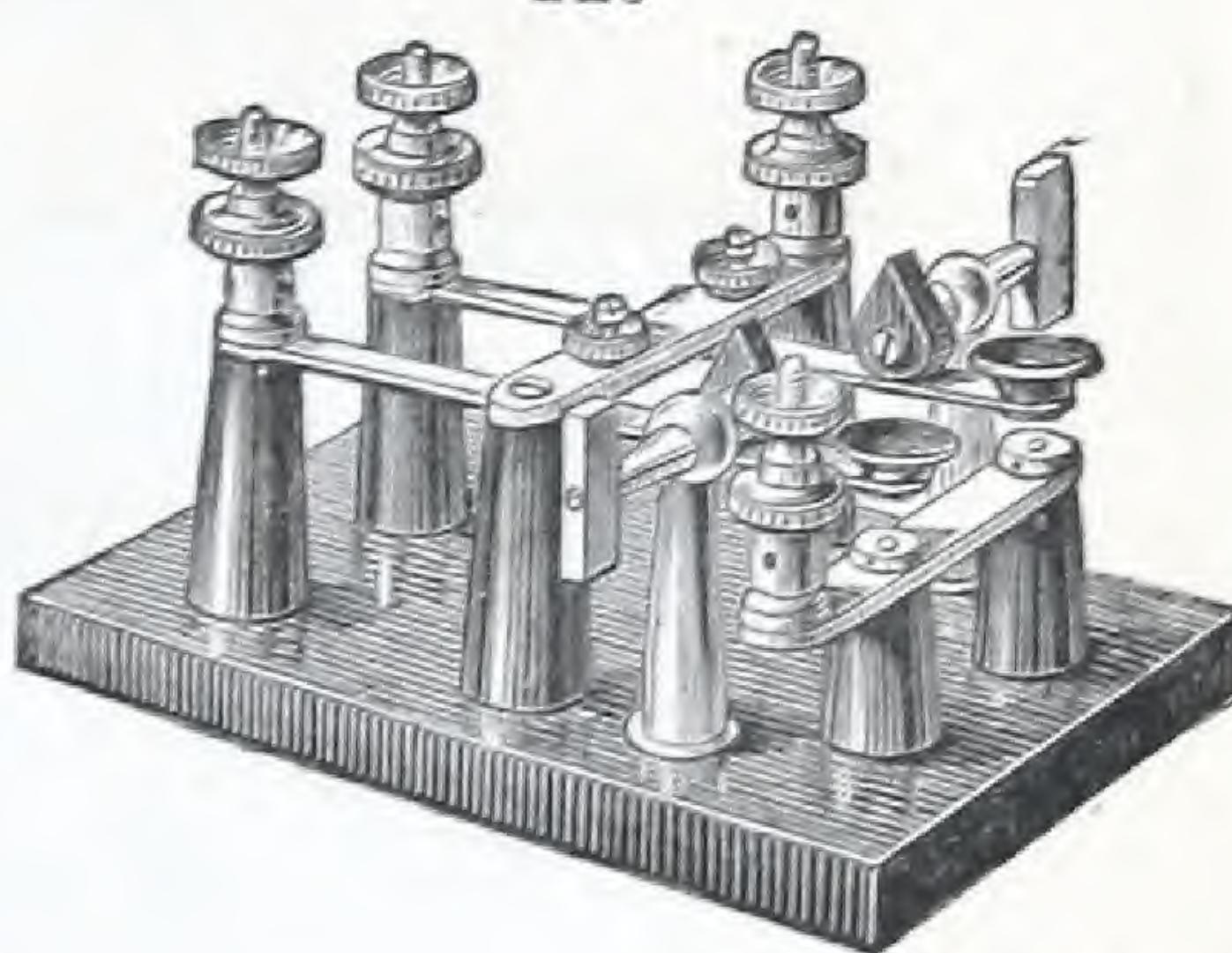
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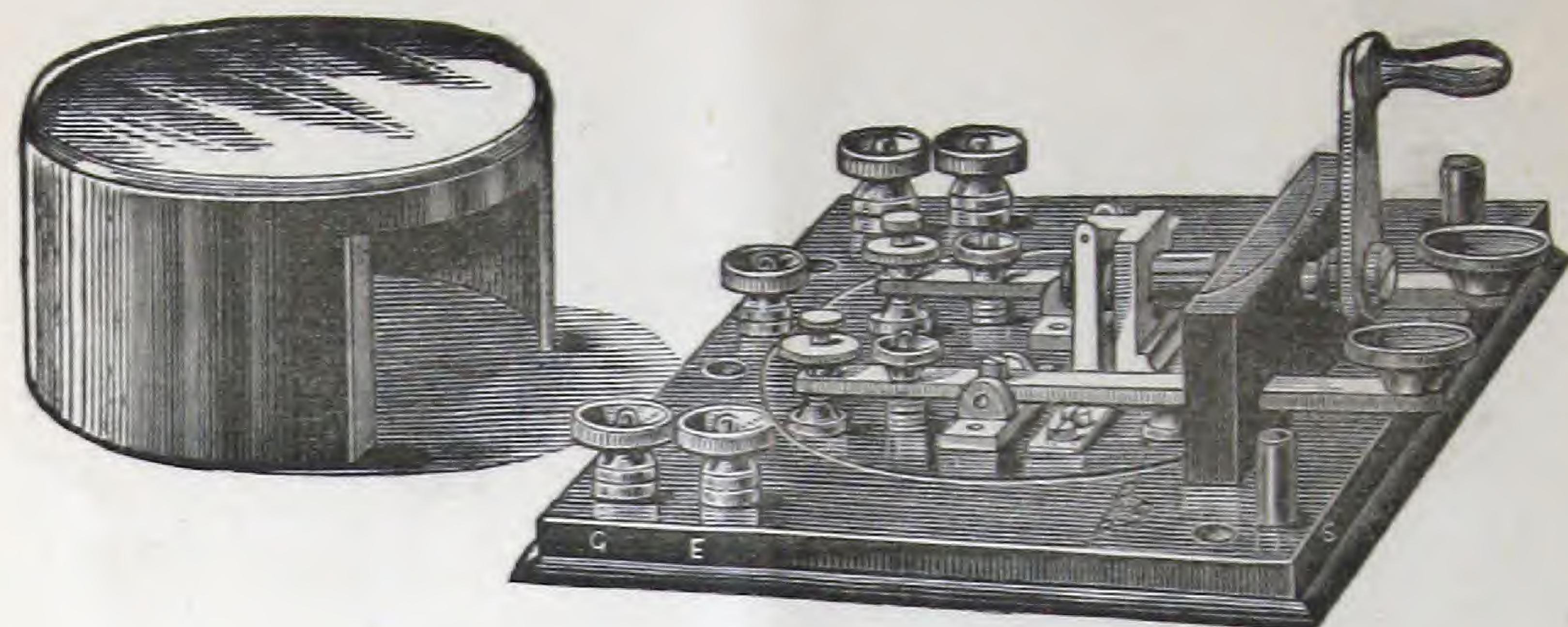
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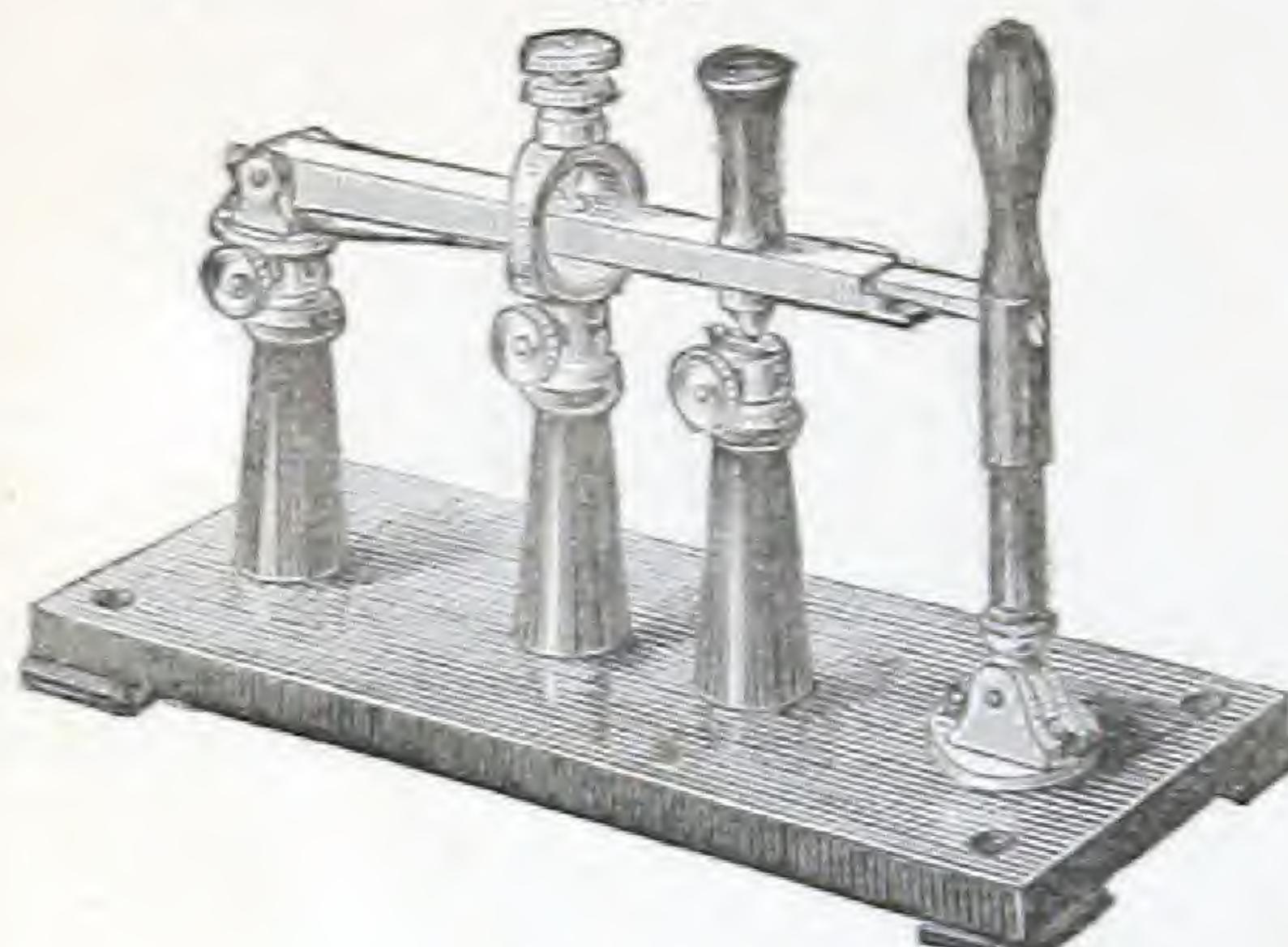
Electrical Keys, &c.

										£	s.	d.
107.	Single Plug Key	0	15	0
108.	The same, on vulcanite pillars with capped plug	1	10	0
109.	Double Plug Key	...	...	...	...	...	...	...	...	0	17	6
110.	The same, on vulcanite pillars	...	...	...	...	...	...	...	...	1	7	6
111.	Firing Key for Torpedoes	...	...	...	...	...	...	...	...	0	15	0
112.	Short Circuiting Key	...	...	...	...	...	...	...	...	2	5	0
113.	Double Successive Contact Key	...	...	...	...	...	...	...	...	2	10	0
114.	Morse Key	...	...	...	...	...	...	...	...	2	10	0
115.	Discharge Key (Lambert's)	...	...	...	...	...	...	...	...	2	10	0
116.	The same with eccentrics	...	...	...	...	...	...	...	...	3	5	0
117.	The same with clamping arrangement	3	3	0
118.	Varley's Reversing Key	3	0	0
119.	Reversing Key on pillars	3	10	0

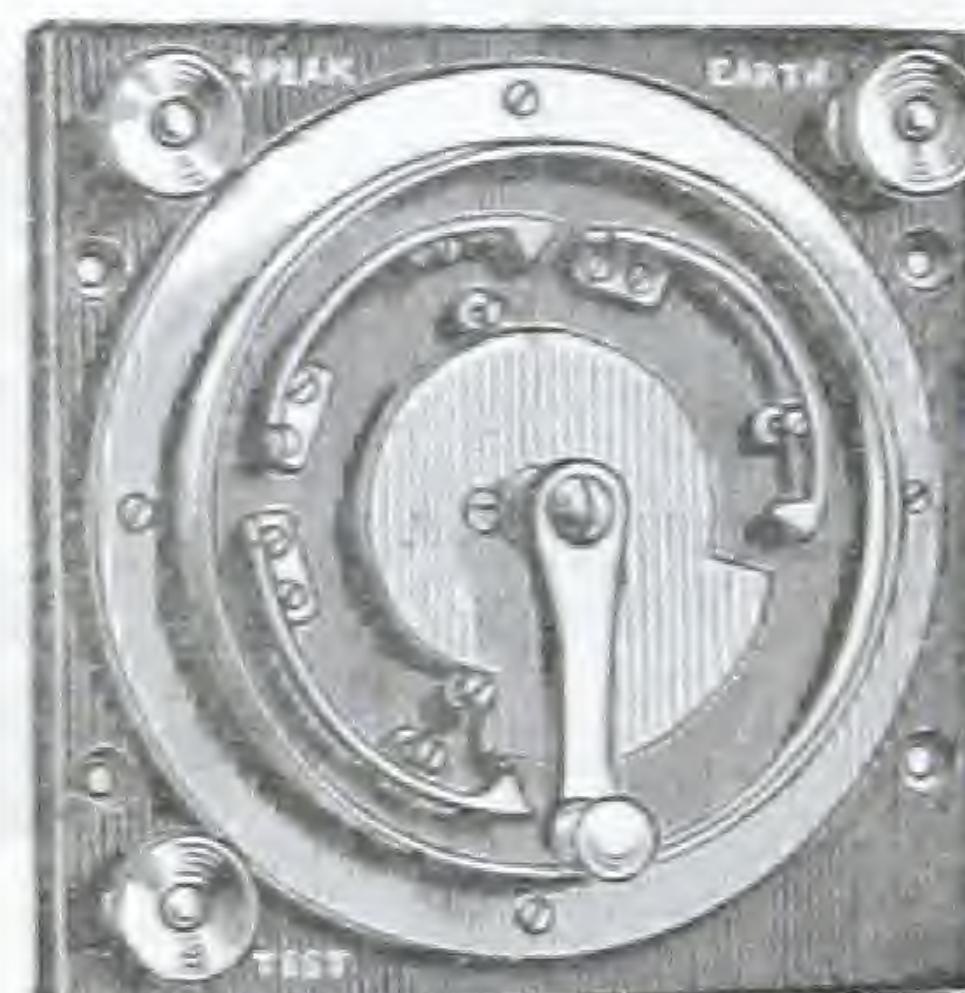
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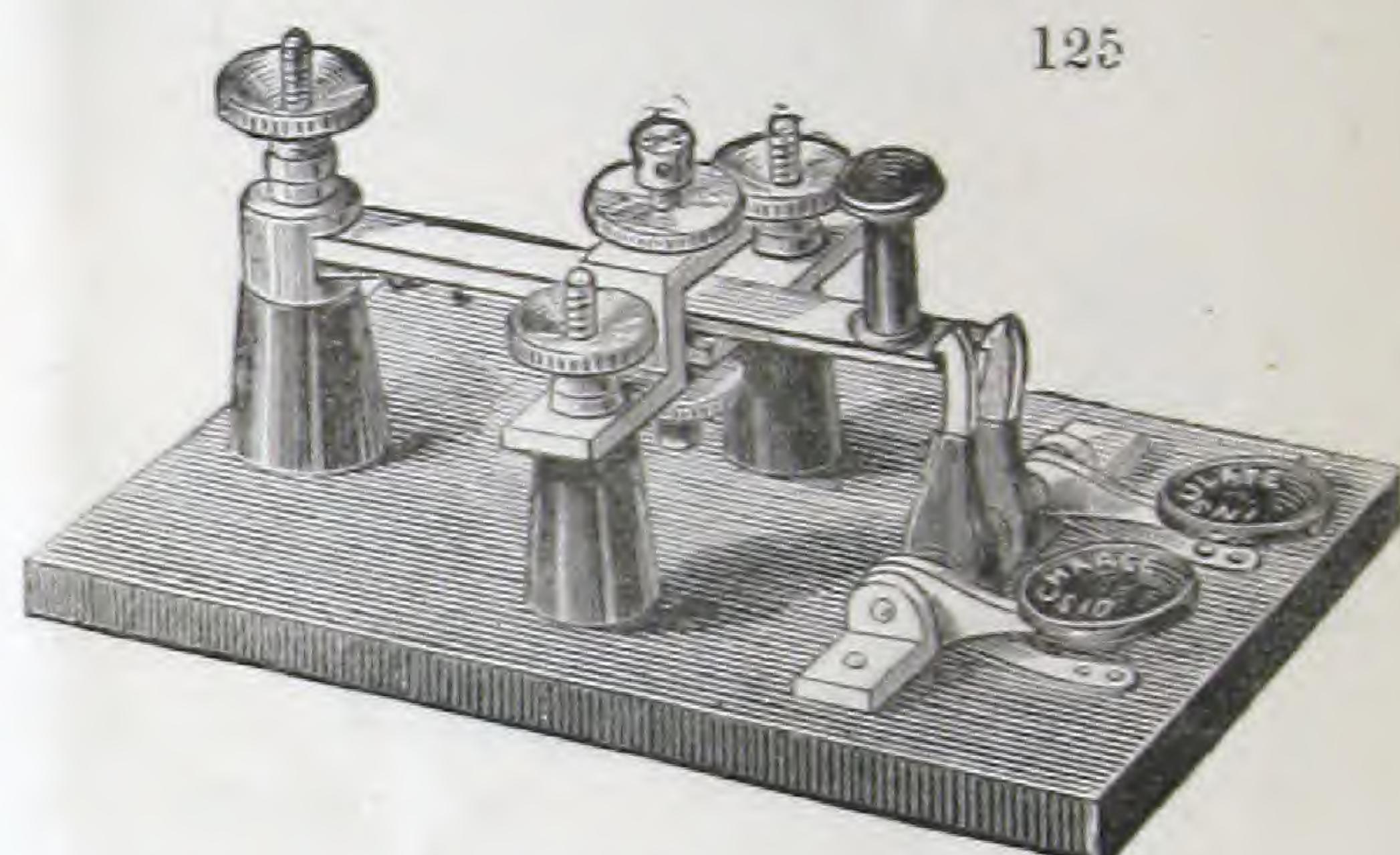
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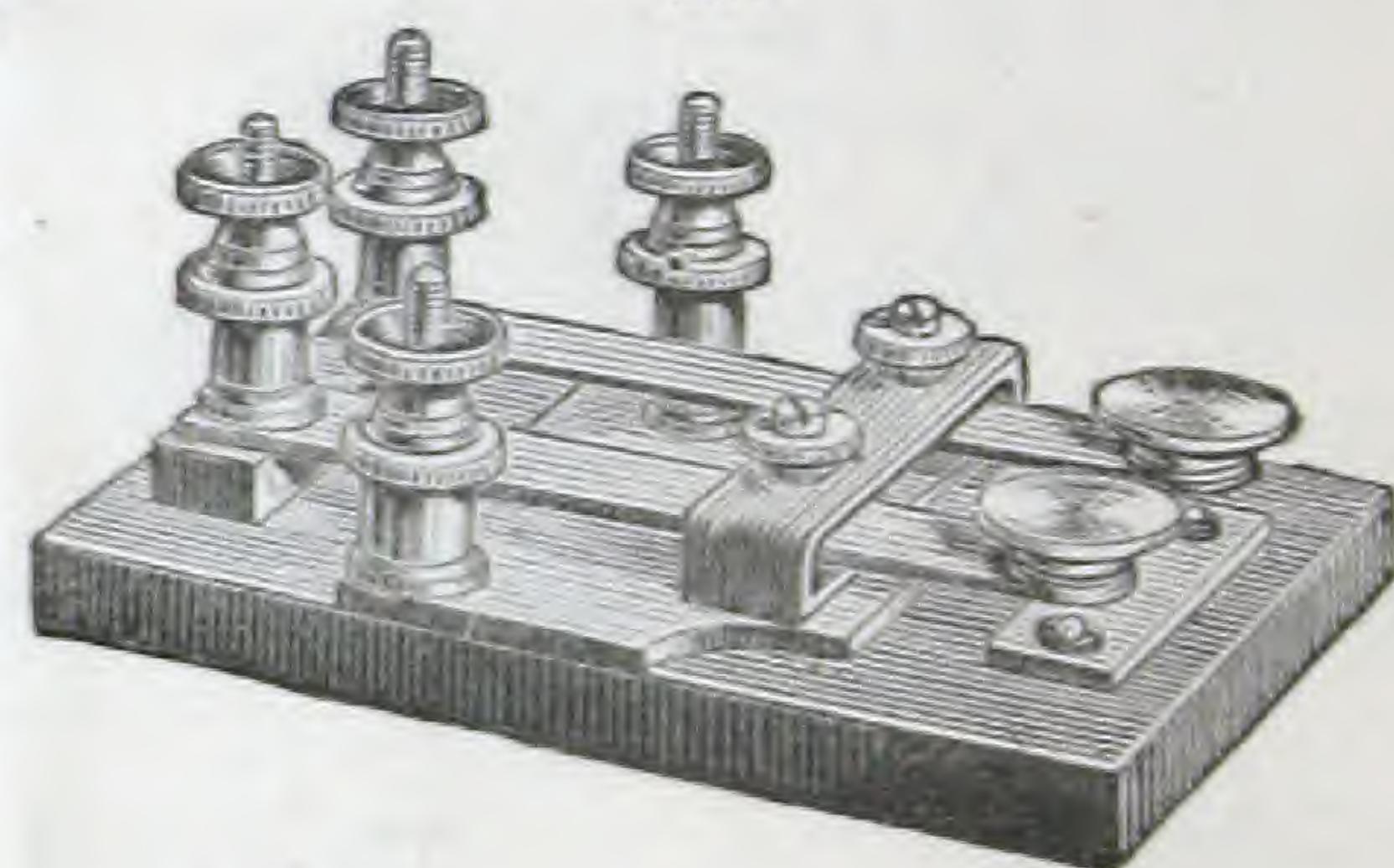
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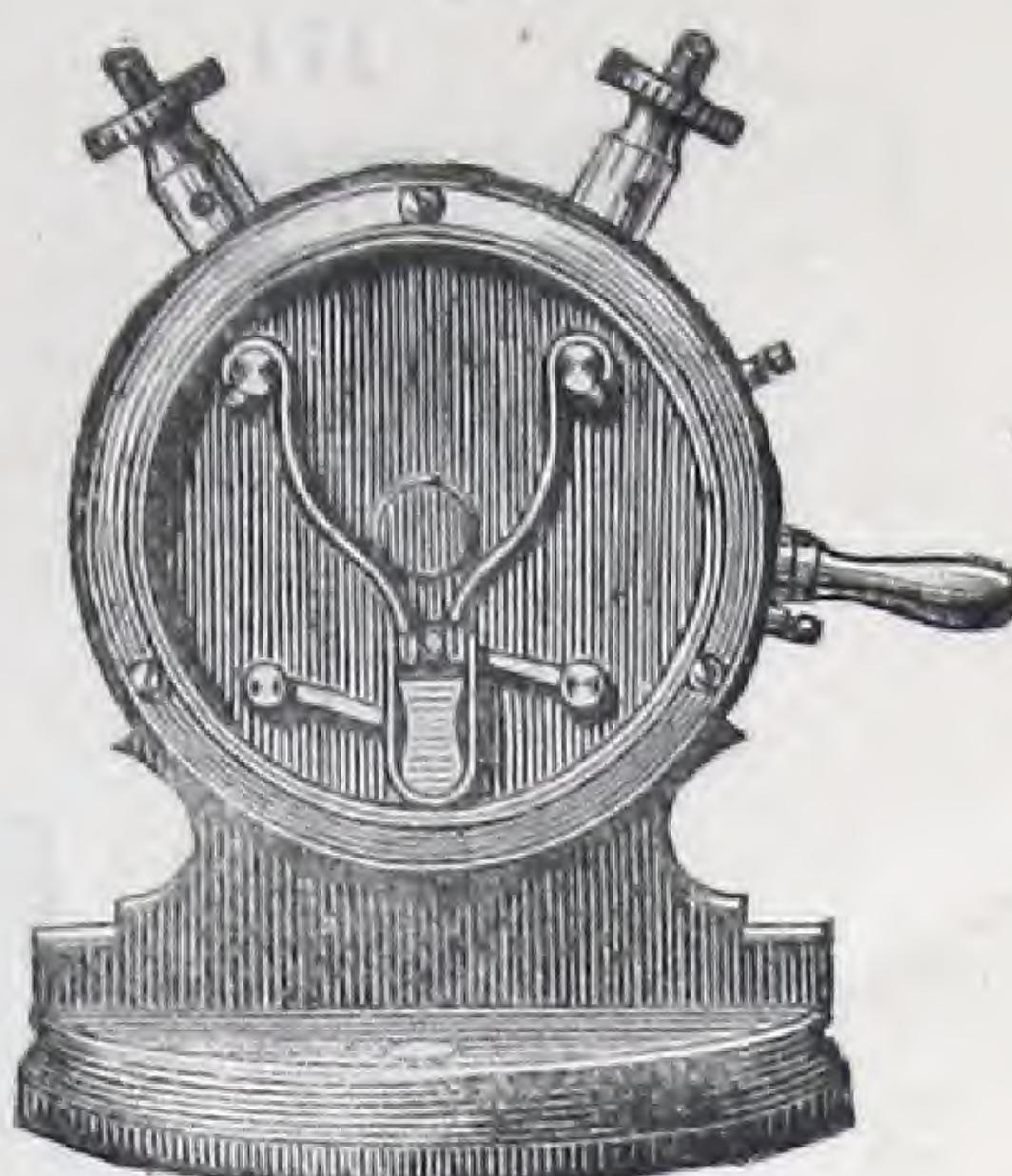
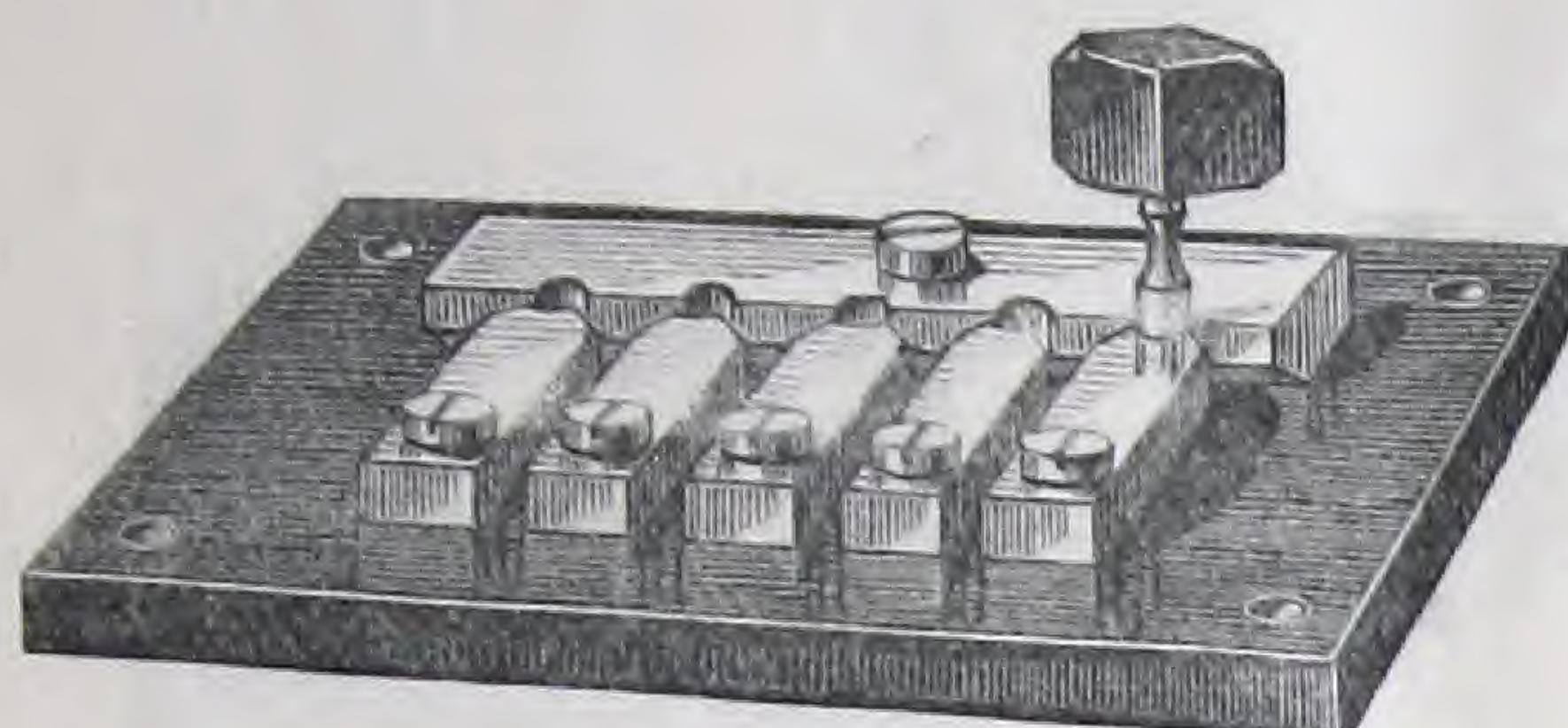


121



										£	s.	d.
120.	Reversing Key cut through	4	0	0
121.	Signalling Key	2	10	0
122.	Dickenson's Key, combining switch and signalling key	5	5	0
123.	Testing Key (Webb's)	...	...	...	...	...	...	...	...	3	10	0
124.	," (Fitzgerald's)	...	...	...	...	...	...	...	...	4	4	0
125.	," (Sabine's)	...	...	...	...	...	...	...	...	3	10	0
126.	Station Switch (Laws')	This Key changes the connections from testing to speaking	...	...	...	...	...	...	...	3	3	0
127.	Station Switch with five connections	3	10	0
128.	Varley's Switch	5	5	0
129.	Battery Switch, 2 connections	0	15	0
130.	,"	3	,"	..."	..."	..."	..."	..."	..."	1	0	0

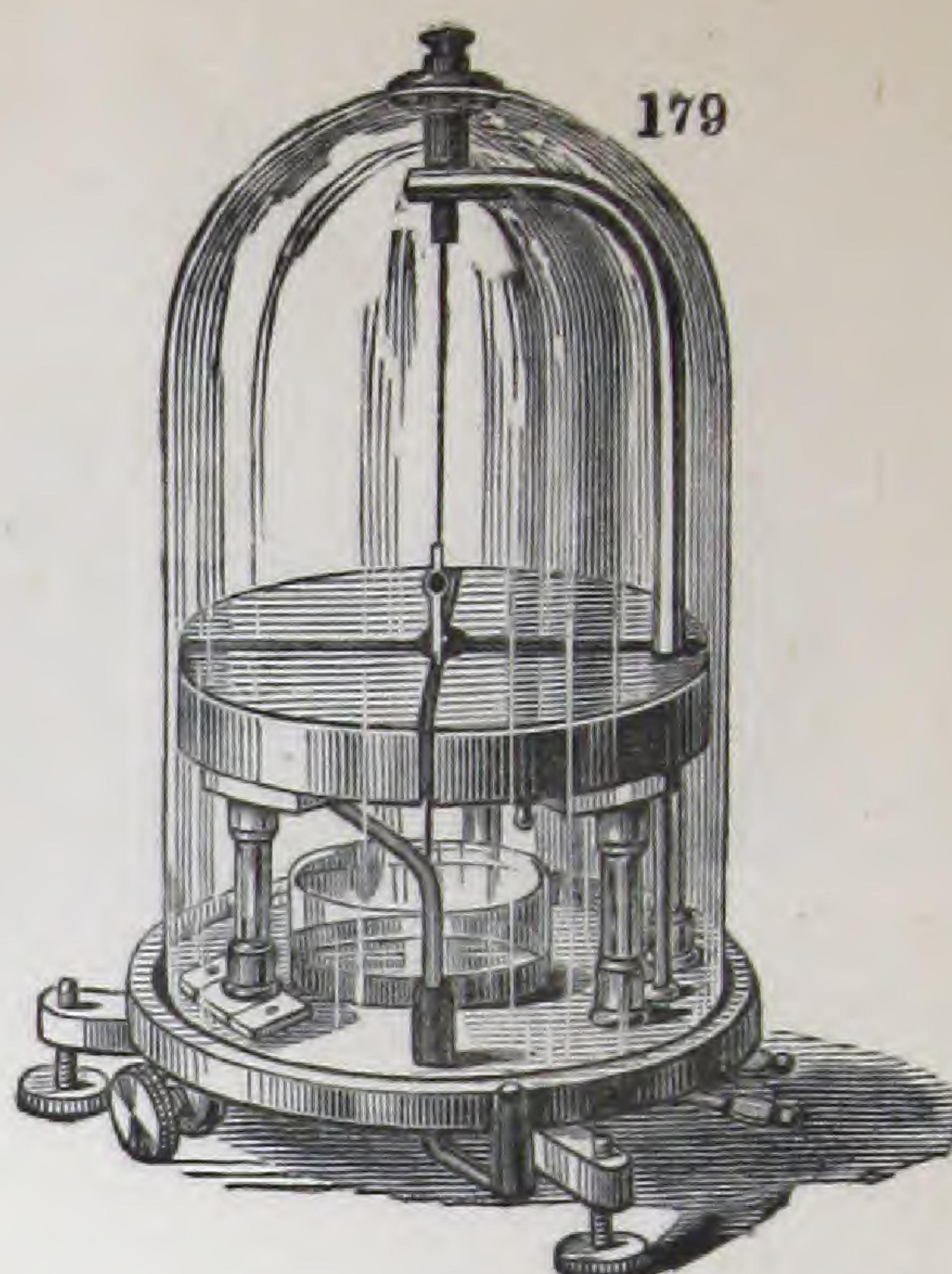
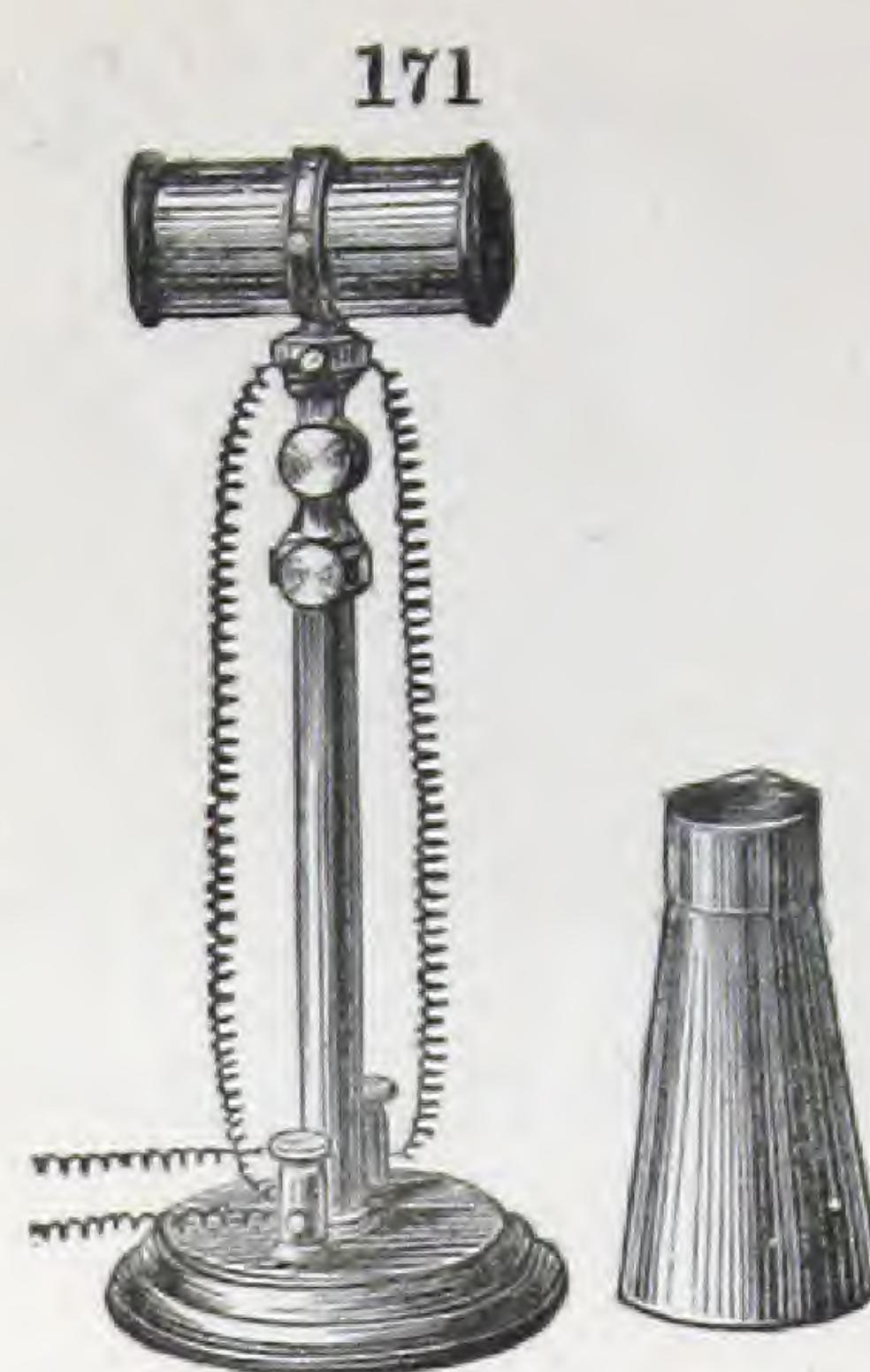
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									£	s.	d.
131.	Battery Switch, 4 connections	1	5	0
132.	„ 6 „ „ „	1	15	0
133.	„ 8 „ „ „	2	2	0
134.	Commutator (Jenkins')	2	10	0
135.	Improved Commutator (mercurial) ...	...	...	...	...	...	...	...	2	10	0
136.	Swiss Commutator ...	...	...	...	...	...	...	...	4	4	0
137.	Short Circuiting Key on three pillars under glass	...	...	...	...	...	...	...	3	15	0
138.	Short Circuiting Key on four pillars ...	...	...	...	...	...	...	...	2	0	0
139.	Stevenson's Shore Switch Arrangement for cables ...	...	...	...	...	...	...	...	7	0	0
140.	Three-way Plug Switch, with long vulcanite handled spring capped plugs	...	...	...	...	...	...	...	5	5	0
141.	Signalling Key with short circuit arrangement ...	...	...	...	...	...	...	...	3	0	0
142.	Law's Cam Reversing Key ...	...	...	...	...	...	...	...	7	10	0
143.	Thomson's Reversing Key for Electrometer ...	...	...	...	...	...	...	...	2	10	0
144.	Closed Commutator, on pillars ...	...	...	...	...	...	...	...	6	10	0
145.	Clark's Dry Air Chambers ...	...	...	...	...	...	...	...	3	10	0

Batteries, &c.

146.	Daniell's Battery, set of six, 6 inches high, on stand	...	...	...	...	...	...	...	2	0	0
147.	Muirhead's Modification of Daniell's Battery, set of ten, in teak box	...	...	...	...	...	...	...	2	5	0
148.	Set of 100 ditto in ten teak boxes, with dial, to combine from five to five, for medical use of the constant current, on stand	...	...	...	...	...	...	...	30	0	0
149.	Set of 50 ditto with dial, on stand	...	...	...	...	...	...	...	17	0	0
150.	Set of 50 ditto on moveable carriage, for moving about in the Wards of an Hospital	...	...	...	...	...	...	...	17	10	0
151.	Single Grove's Battery, size of Platinum, 5 by $2\frac{1}{2}$ inches	...	...	...	...	...	...	...	0	11	6
152.	Set of four Grove's Batteries, size of Platinum 5 by $2\frac{1}{2}$ ins., on mahogany tray	...	...	...	...	...	...	...	2	10	0
153.	Set of eight Grove's ditto	...	...	...	...	...	...	...	4	17	6
154.	Set of fifty Grove's 5 by $2\frac{1}{2}$ inches	...	...	...	...	...	...	...	34	10	0
155.	Set of five Grove's, Platinum 7 by $6\frac{1}{2}$ inches	...	...	...	...	...	...	...	10	10	0
156.	Smee's Batteries ...	...	...	...	...	...	from 6s 6d. to	0	15	0	
157.	Set of six Smee's	...	...	...	...	...	...	...	2	5	0
158.	Bunsen's Battery, single cell, 6 inch	...	...	...	...	...	...	...	0	6	6
159.	Set of ten ditto, with stand	...	...	...	...	...	...	...	3	10	0

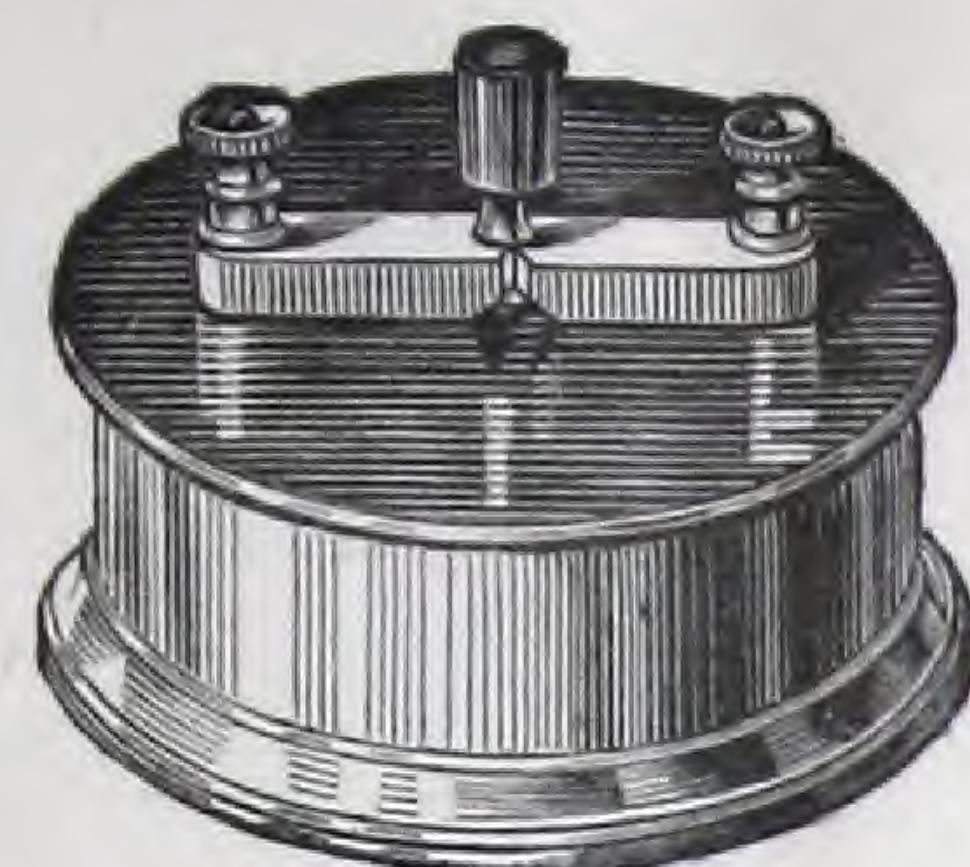


										£	s.	d.
160.	Leclanche's Batteries—	No. 1 size	...	...	...	...	...	...	...	0	6	6
161.	"	" No. 2 "	...	...	...	...	...	...	...	0	4	6
162.	"	" No. 3 "	...	...	...	...	...	...	...	0	3	6
163.	Bichromate of Potash Batteries,	2 quart size, 2 zincs, and 3 carbons	...	...	...	...	...	...	...	2	2	0
164.	"	" 2 quart size, 1 zinc and 2 carbons	...	...	...	...	...	...	...	1	15	0
165.	"	" 1 quart size, 2 zincs, and 3 carbons	...	...	...	...	...	...	...	1	10	0
166.	"	" 1 quart size, 1 zinc, and 1 carbon	...	...	...	...	...	...	...	1	0	0
167.	Faure's Battery, No. 1 size	...	...	...	...	...	...	...	...	0	14	0
	" No. 2 "	...	...	...	...	...	...	...	...	0	9	0
	" No. 3 "	...	...	...	...	...	...	...	...	0	6	0
168.	Stoppers for ditto of any size	...	...	...	...	...	...	...	...	0	1	0
169.	Menotti's Cells	...	...	...	...	...	...	...	...	0	7	6
170.	Clark's Standard Cell	...	...	...	...	...	...	...	...	1	10	0
171.	Thermo Electric Pile of great sensitiveness, 54 pairs	...	...	...	...	...	...	...	...	4	4	0
172.	Extra Silver Plated Cone for ditto	...	...	...	...	...	...	...	...	0	9	0
173.	Case for ditto	...	...	...	...	...	...	...	...	0	3	0

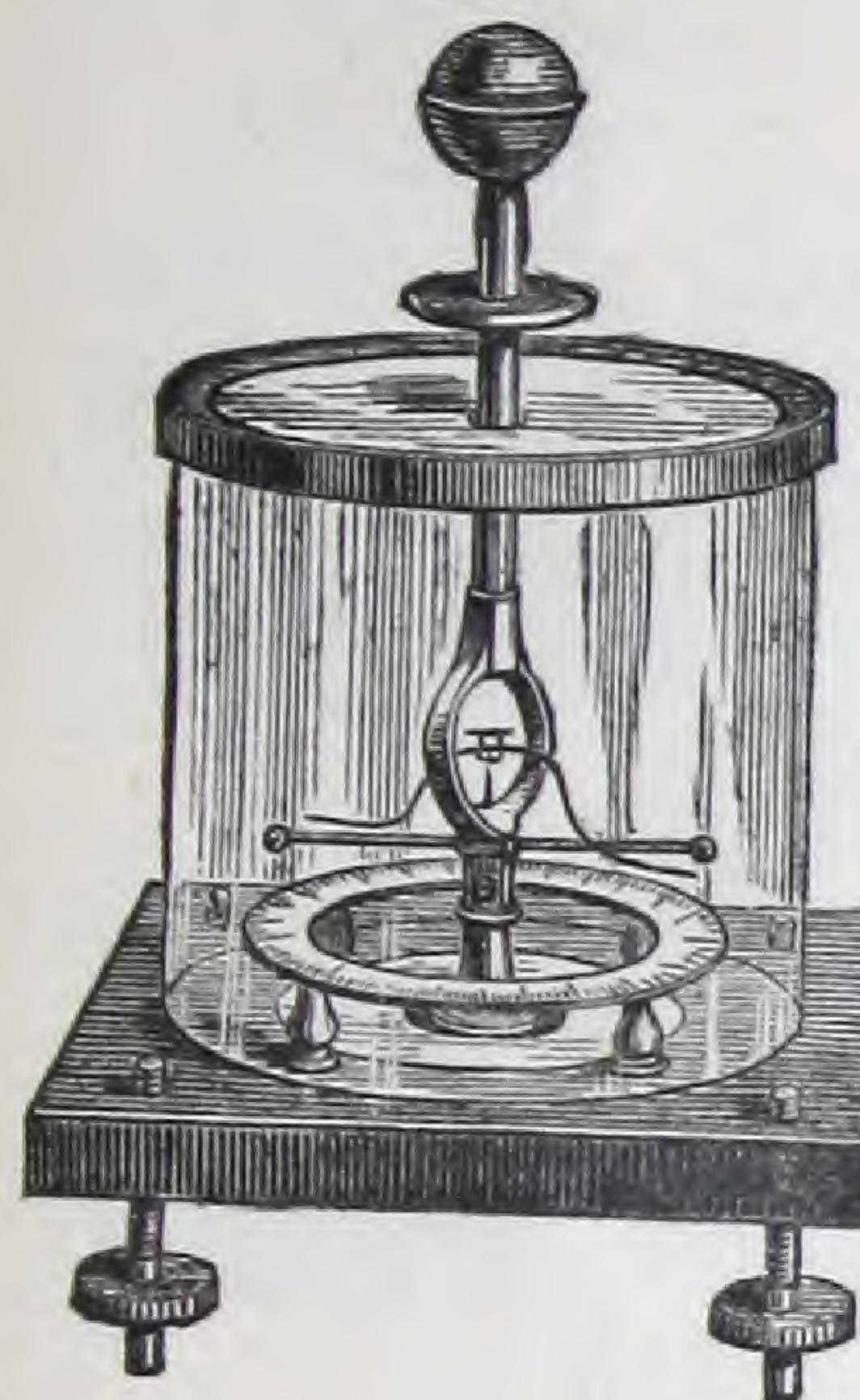
Statical Electricity.

174.	Ebonite Exploder in oak box for use in mines, or with torpedoes	...	16	0	0	
175.	Holtz Machine, 14 inch plate	...	...	10	10	0
	" 18 "	...	...	14	0	0
	" 22 "	...	...	18	0	0
176.	Electrical Machines of different constructions, glass and vulcanite plates, Leyden jars, electroscopes, &c.	...	...	...	...	...
177.	Sir W. Thomson's Quadrant Electrometer	...	...	35	0	0
178.	Sir W. Thomson's Portable Electrometer	...	...	12	0	0
179.	Quadrant Electrometer on Thomson's principle, for lectures, which will show the tension of a single cell, fitted with cage	...	...	6	5	0
	Case	...	...	0	8	0
180.	Lamp with double screen, slide, and adjustable lens for use with above	1	5	0		
181.	Replenisher for use with quadrant electrometer	4	4	0
182.	Absolute Electrometers

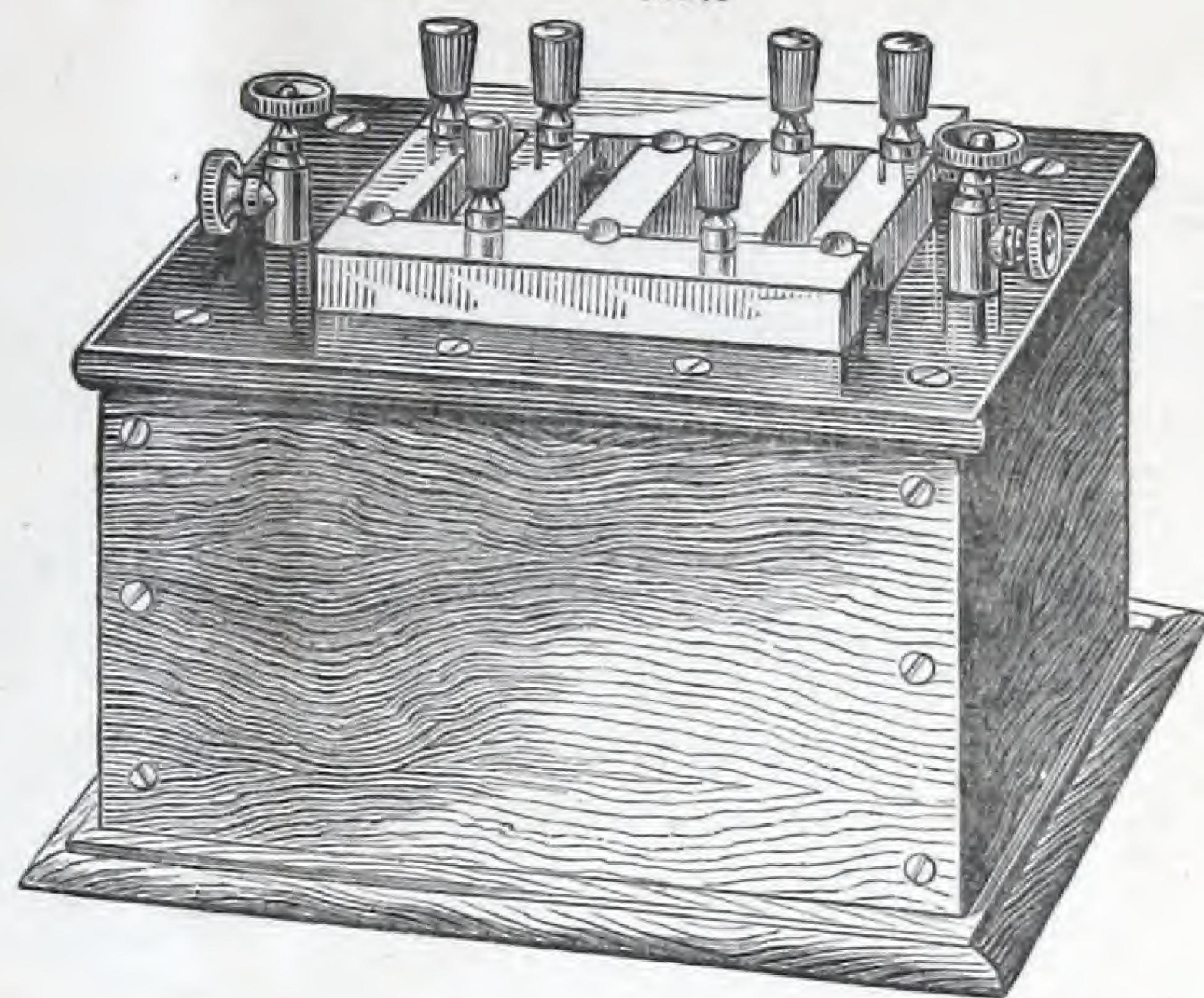
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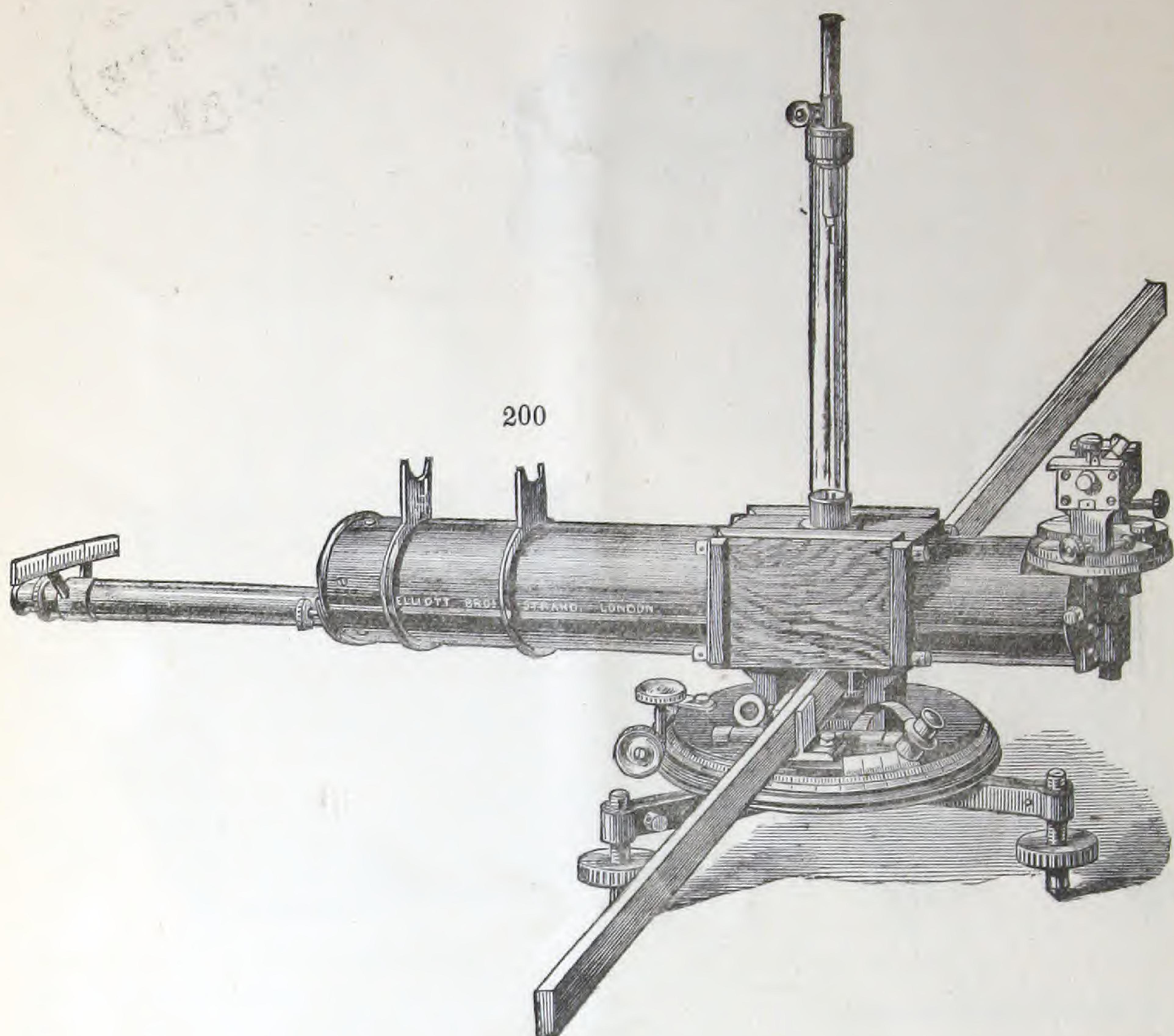
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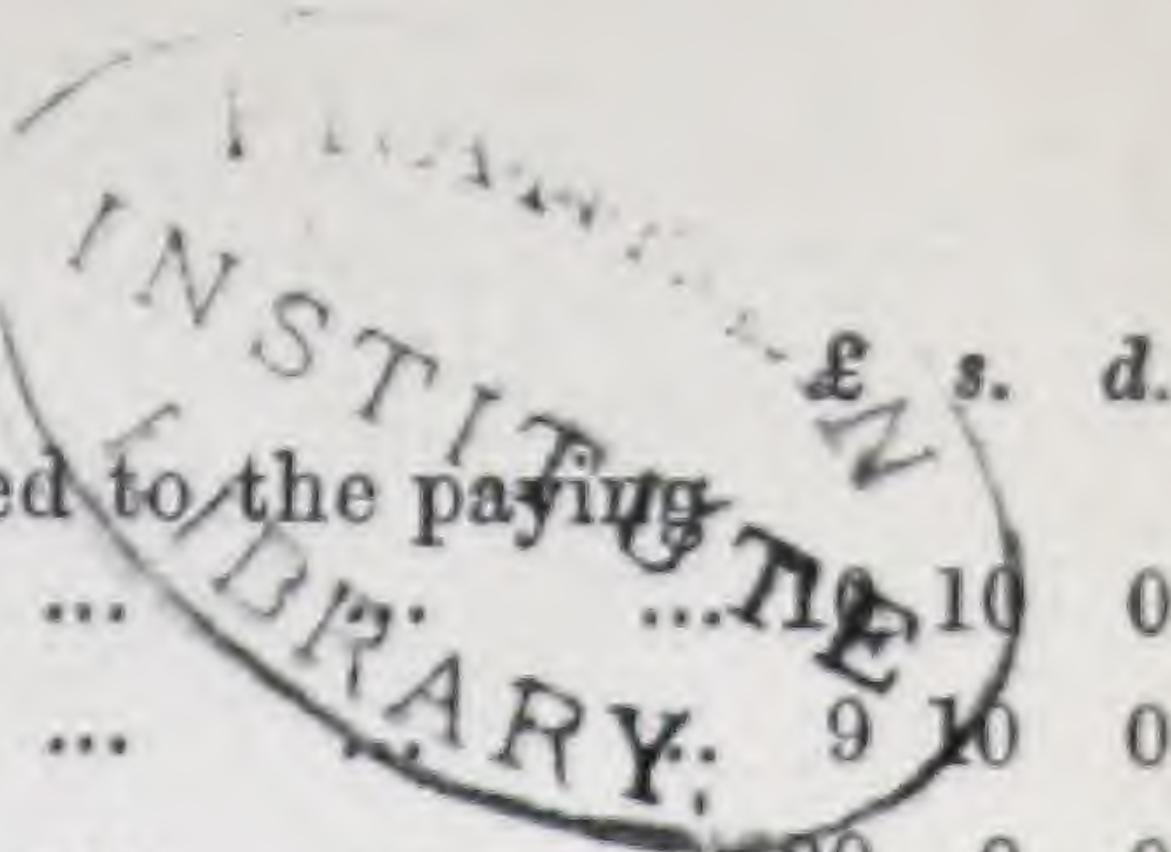


										£	s.	d.
183.	Peltier's Electrometer	3	10	0
184.	Torsion Balance, superior construction	6	10	0
185.	Ampére's Spirals	...	...	...	...	...	...	...	...
186.	Dove's Differential Induction Coils	...	...	...	...	...	...	...	...	4	14	6
187.	Delezenne's Circle for showing the induction of terrestrial magnetism	...								3	10	0
188.	Du Bois Reymond's Induction Coil	...	...	...	...	...	...	...	...	4	4	0
189.	Condenser $\frac{1}{3}$ Microfarad	...	...	...	...	...	...	...	...	7	10	0
190.	" $\frac{1}{2}$ "	...	...	...	...	...	...	...	...	10	0	0
191.	" 1 "	...	...	...	...	...	...	...	...	13	10	0
192.	Condenser 1 Microfarad, sub-divided into five parts, .05, .05, .2, .2, .5	...							...	15	0	0
193.	Condenser 1 Microfarad with twelve sub-divisions, .001, .002, .002, .005, .01, .01, .02, .05, .1, .1, .2, .5, arranged so that capacities from $\frac{1}{1000}$ to 1 Microfarad can be obtained by putting in plugs as in a resistance coil	...								30	0	0
194.	Condensers of higher or lower capacities, and with any sub-divisions made to order	...	...	...	...	...	...	...	...
195.	Riess' Condenser	...	...	...	...	...	...	...	...
196.	Kohlrausch's Condenser	...	...	...	...	...	...	...	...
197.	Binding Screws and Terminals in great variety	...										
198.	Silk and Cotton covered Copper and German Silver Wires	...										
199.	Gutta Percha covered Wires	...	...	...	...	...	...	...	...



		£	s.	d.
200.	Unifilar Magnetometer, Kew pattern ...	...	...	... 60 0 0
201.	Torsion Balance and Magnetometer combined	...	...	... 15 0 0
202.	Boulengé's Chronograph for determining velocities...	...	...	... 35 0 0
203.	Bianchi's Densimeter for testing gunpowder...	...	...	... 90 0 0
204.	Vertical Densimeter as arranged by Major Morgan, for obtaining the specific gravity of block powder	...	...	... 17 17 0
205.	Melloni Apparatus for demonstrating the laws of reflection, refraction, diffusion, and polarization of heat, fitted on bench complete	...	...	... 60 0 0
206.	Optical Bank for measuring wave lengths, interference, polarization and direction of vibrations of light, &c., with morocco case containing slits, &c.	35	0	0
207.	Micrometer for above	...	...	... 3 3 0
208.	Steel Wedge for setting slits	...	...	... 0 8 6
209.	Optical Bank, fitted with Melloni, Jamin, and other apparatus	...	...
210.	Cathetometers, Spectrometers, &c., &c.	...	...
211.	Richards' Steam Engine Indicator of the latest construction, fitted with Darke's patent detent and cord adjuster	...	...	... 8 10 0
212.	Guniotte and De Hennault's Patent Continuous Steam Engine Indicator	26	10	0
213.	Hearson's Patent Strophometer or Revolution Indicator	...	...	... 10 10 0

214.	Rotometer, used principally on board cable ships, applied to the paying out machinery	...	...	...	...	...	...	...	...	10	0
215.	Cooper's Patent Slide Valve Indicator	...	...	...	...	...	...	...	...	9	10
216.	Edson's Patent Self-recording Pressure Gauge	...	...	...	...	...	...	...	20	0	0
217.	Engine Counter in case	...	...	...	...	...	...	...	5	0	0
218.	Revy's Current Meter for determining the velocity of currents at great depths	...	...	...	...	...	...	...	12	0	0
219.	Current Meter, ordinary construction	...	...	...	...	...	...	...	5	0	0
220.	Surveying and Drawing Instruments of all descriptions	...	...	...	...	...	...	...	...	...	...
221.	Physical Apparatus for lecture purposes	...	...	...	...	...	...	...	...	...	...

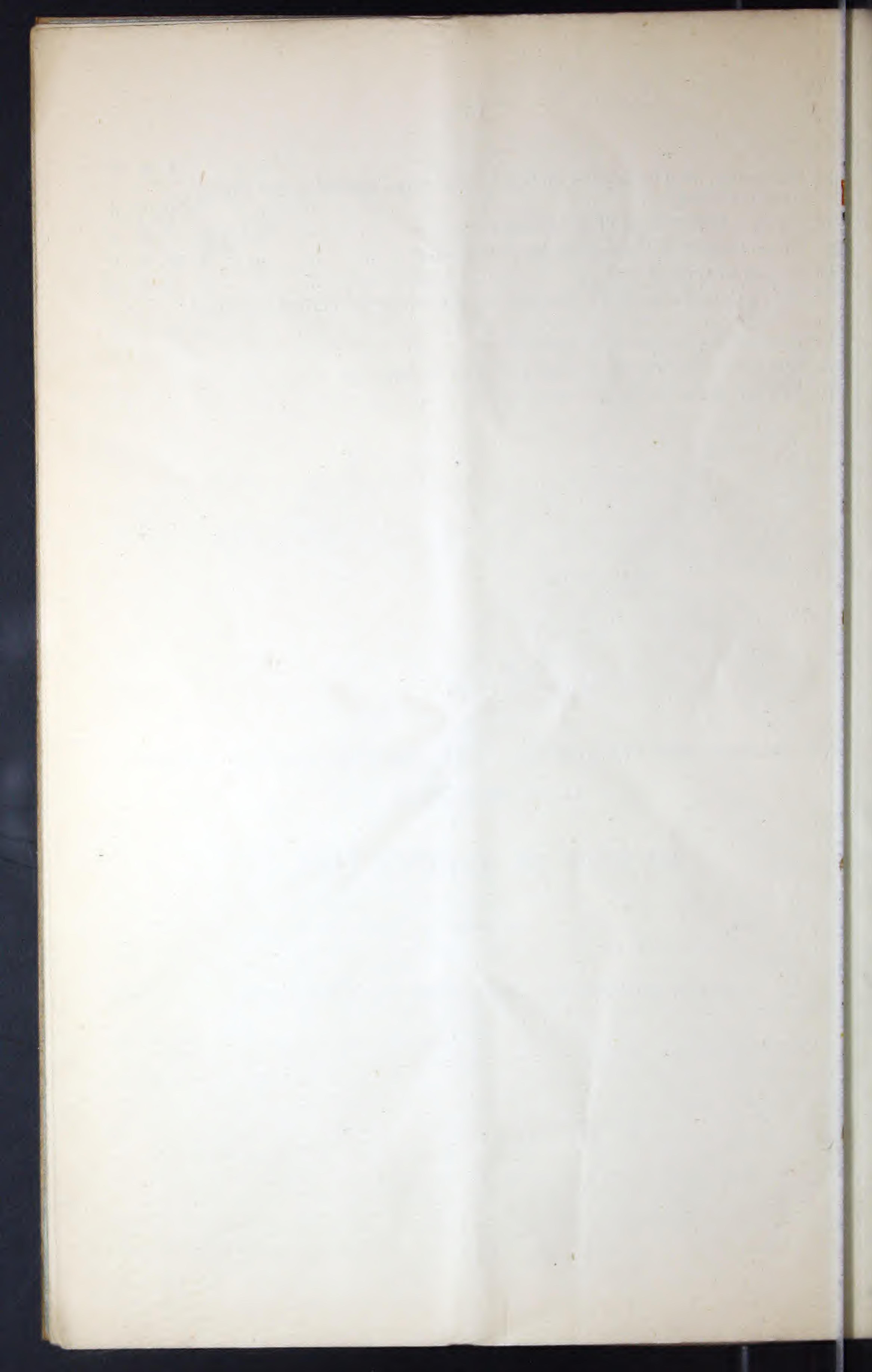


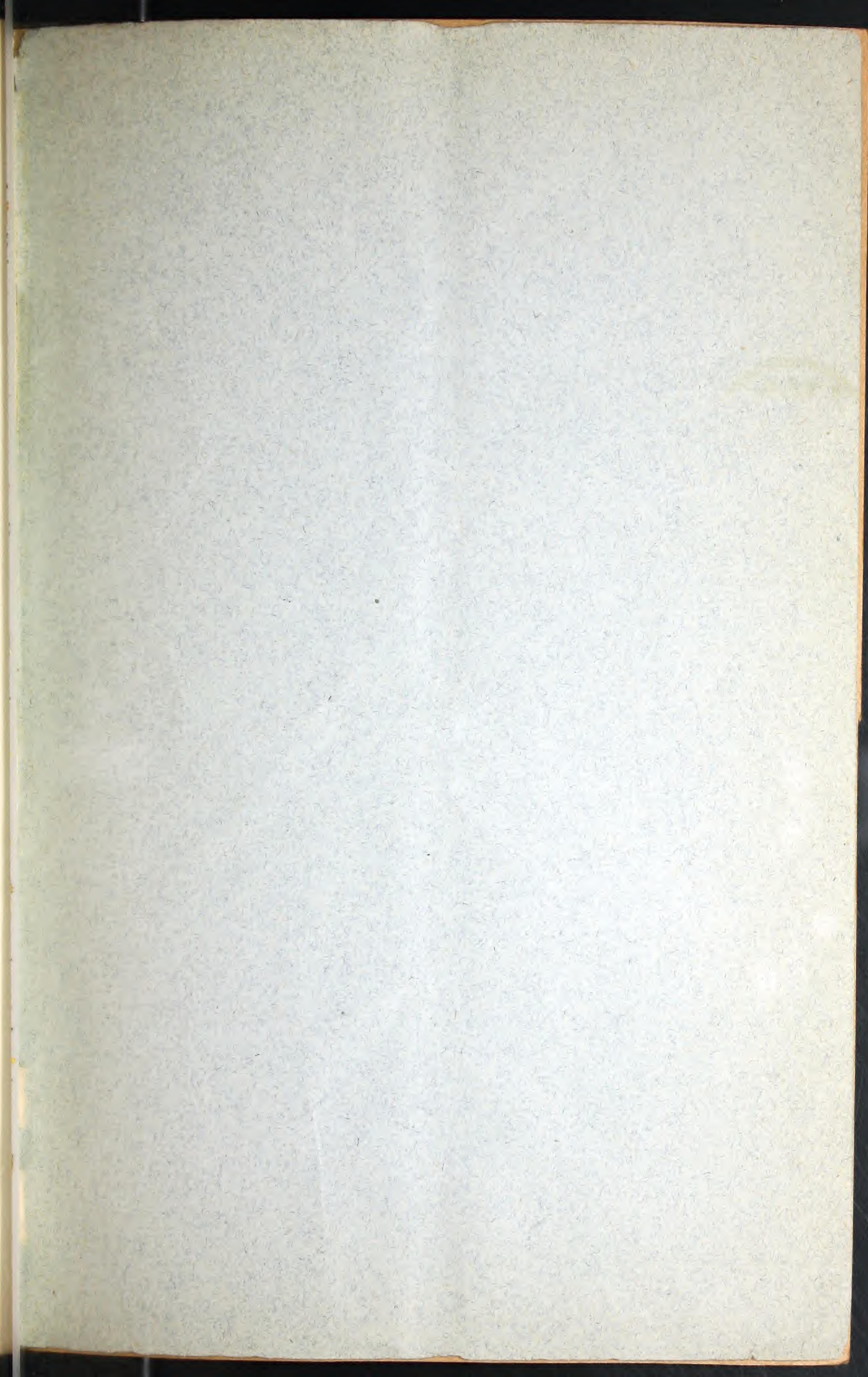
*All communications with reference to this Catalogue should be addressed
to the Manufactory,*

101 & 102, ST. MARTIN'S LANE.



OTHER ILLUSTRATED PRICE LISTS ON APPLICATION.





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